Mcbride

all Salts Whether acid or Alkaline have something in Com-
with makes them Antiseptic 886
Astring: Gummy Resins much more
Antiseptic: than Sea Salt. Ibid:
Camph: a 100 times more so 118
their quality depends on their
affinity to Fixt Air by which
they absorb & retain it 121. 122.
Acids & Alk: restore Putrid
Subst: but Spt Mind: all Nent:
Astring: Lime Water, Ardent: Spt
the Bark. Vales: Chamomile flow:
do not 129. 130.
Wart an admirable Succedaneum 131. 32.
The Bark restorat: by the quant:
of Air it Emits in ferment: 139.
Putrid Fevers cured by Dr Haens
even without an Emet, by Vegeta
bles 194. 195.

Conjunctiva — Memb: of ye Palpeb:
Sclerot: 1st: Coat Dur: Mater —
Vasc: Memb: fusc: — Pia Mater
Choroid: ab Alb: Circ: Sclerot: Nerv: Opt — Ant:
Iris, Post: ob pigment: Nig: Uvea
< (In Fœt: Pupilli claus:) —
Lig: Ciliar: a Choroid: ad Caps: Lentis —
Vit: Humor: Vasa a vas: Retinæ
Crist: Lent: Vas: a Vit: Hum =

Dr Cullen

Jane Cockburn — a Paralysis
Rheumat Cases
Barbara Campbell
Alex: Niven — Isabel McArthu
Willm Bell — Thos Hamilton
Hysterics
Janet Seton.
Mary Frazer. Mixt Case
James Allan, McLane, Fever

Nymphæa Lutea & Alba Perfect
Echium Anglicum —

Sambucus Nigra
Cardamine Impatiens
Copis Factorum
Amphyllis Vulneraria
Lactuca Virosa
Geranium Robertianum
Juncus Articulatus
Echium
Inula
Ranunculus Sceleratus
Veronica Anagallis
Sedi umbrosum Nasturtium
Comarum Palustre
Lycnis Flos Aculi
Ranunculus Aquatilis Ballis
Vicia Sativa
Lamium Album
Oenanthe Fistulosa
Achilea Millefolia
Euphorb. (Var)
Cuscuta Viscosa

Bellis Perennis -
Eupatorium Montanum
Achillea Vulgaris
Geranium Robertianum

Potamogeton Natans
Ø Pusillum
Dº Crispum
Lemna trisulca (small)
Potamogeton Perfoliatum
Polygonum Amphibium
Lychnis Flos cuculi
Hypnorus Vulgaris
Myriophillum
Ceratophillum
Aquisetum fluviatile
Scirpus Palustres
Iris Pseudacorus
Bidens Flos Aqua
Montia fontana
Ranunculus Aquaticus

Edinb: June 22d 1764

Mord Maximum P: Drum

Malv: Silvest: Do —

Conium Maculat: Do —

Cucubalus Bean

Fumaria Officinalis —

Thlaspi Bursapastoris

Anthemis ~~cotula~~

Lychnis Male & F —

Sinapis Sylvestris —

Borrago Officinal =

Papaver Rheas —

Vicia Cracca —

Potentilla Argentina

Trifolium Pratense

Erisimum officinale —

Chærophyllum Silvestre

Myosotis —

Erysimum, Barbarum

Sisymbrium Aquat

Mr Dixon

at Mrs Millars'

St Mary's Wynd

De Motus Musculares

Accelerat: Circulat: Paragraph: 142 ad 146

Natus: Susp: 168 & 170

Secret: turb: mun: Velocit: 215

Reparat: deletas: Febres 240

Causa movent: fatus, irritabilitas

a mag: Cerebr: & Pond: Cordis 248

Nutritio — — — — 249

Effect: Resp: in Sang: 302. Calor 303

— — Densitas 304

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Sang: Volat: Alc: Fortu — 439 —

Motus, Persp: aggetus &c &c 440-1-2 —

Somnus Modumen on: Motuum 527.

Usus Cibi & Potus — — 581 —

Condimenta varia — — 589

Cibi mora in Ventriculo 590 —

Concoctio — — 77 —

Varia Dispositiones Glandularum

Vasorum Paragraph: 222 —

Valvulæ tricuspides dantur
os venæ Cavæ, Semilunares impe-
diunt regurgitationem Sanguinis
a Pulmonalis Arteria
Valv: Mitrales impediunt regurgitat:
a Sinu Sinistro in Pulmones.
Tres Valvulæ Semilunares claudunt os
in initio Aortæ

Macbride

Digestion a Fermentatory Process 3.
The 3 Stages of Fermentat: are
Sweet, Sour, Putrid — — 8
The course of Digestion is 37. 38. 39 &c
Anim: & Veget: Subst: do not form:
well alone
the Aliment first throws off Ferment 37
this & again absorbs it — 38
and does not carry it first into the blood
without having been previously extracted
but the food is entirely broken, & its original (39.
nal nature totally changed wholly it is
in the Aliment: Canal Fluid: —
Bile does not Ferm: so soon as Salin: 55
The Manner of Digestion — 59. 60.
Fluct: Aid Taken up by the Lact: 64
&c &c 65

Stud: Medici

De Bile Progr: X.XVII.

Bohnius de in circulo Anatom:
sed Opt: Verheyenius in 2do Lib: Anat:
Tr. 1. C. 9.
Sylvius de la Boe, multa quidem,
maxime de modo generat: Bilis,
non analyseos parum. Diss: 2. 8. 10.
Tr: de Pietro &c Sed plurim alii experimenta cum bile fecerunt.
Baglivius Op: om. P. 439 &c. Helmont
in Sextup: Digest. D. Didier Exper:
sur la bile des Pestiférés
Du Hamel in Hyst: Acad: regiae
Scientiarum P. 76. Hombergius
ibid: 1709. Fr Hofmannus in
Observat. Chymicis. Vieussenius in
in Epist de Bile & Phil: Trans. N. 241
Carolus Drelincourtius post L. de Lienosis; Pechlinus, J. Leonicenus
de metamorph Apollinis & Aesculapii
Duretus in Coac: Sect: 4 Aph 43. Sect. 2
Lib: 1 — Spigelius, Mich: Sennert:

Method: Studii Med:

Andreas Taquet in Theoria et Prax: Arithmet: optime docuit quomodo inventa sunt operat: & quib: rationibus innitatur Arithmetica Amst: 1704 —

Borelli de vi Percussionis est Liber valde necessar: om: Medico

De Osteologia & Medulla Clopton Havers Edit: Lond: 8. 1691 —

Andreas Vesalius de Corporis fabrica Bibliotheca Med: carere non potest —
(1555)

Henricus Ridlius de Anatomia Cerebri, ubi tractat de Motu Musculari —

Gul: Pison de Medicin: Brasiliorum, Georg: Marcgraaf de Liebstat in Hist Naturali Brasilia cum Pisone edita —

Barbuio Pathologia
Prægumenon, Predisponens
Prodatarticum, Occasionalis
Symptomata Morbi, Causa et 59. 60
Symptomatis - 87. 90 -
Causa Morbi, et Potentiæ 95. 96
Effect. Morbis sunt propriæ Certamen
Natura propriam Salutem propug-
nantis
Molimina Naturæ non turbanda
sed prudenter regenda 103. -
Varsalius Reges ambrentibus 104 -
Omnia Symptomata cujusvis generis
reduci possunt ad Actiones, evacua-
et qualitates sensibiles 119 -
Differunt: Morborum sunt
vel Essent: primarid; vel accident:
varid Secundarid - 121
Sunt vel in Contentibus vel contactis
Communes vel Propriæ - 126.
Oriuntur a relatione Part: ad partes & 127
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Fluidum est aqua sola. Solidum
est triplex, Inflammabilis, Salinum
& Terreum - - 131

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ab omni alia diversum 286 —
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Absoluta. Comparate ad partes firmas
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& Terra & Aqua — 276
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Tenacitas fluidorum — — 284.
— Animata &c 288
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In Crassament: & Serum — — 337
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Crassament: in Fibrosum & rubrum. 339.

Rubra pars minquam flavescit 344.
Lac Sanguis albus, Sanguis Lac
rubet — — — — — 345.
Sanguis Nigrescens — 365
Dissolutio — — 366
288

v.

6.

5

If I had a Fort: give up to all kind of Dis:

S~

That ~~a Fortune~~ alone will recom: to any Comp:

R— unless stud: Law

No. As nat:ary Communst: ~ who Assoc: with &c ^{no}Lords, ^{no}Tradesmen, Advocates— then tis necess: to learn to be an Advocate

N—

Ha. ha. then a Man must talk Law in every Company he goes into Ha haha —Ha. ha ha—

R

No by no Means, never introd: a Law Case but Stud: Law ~~as as to be fit for an~~ Adv: makes him acq: wth such Subj: as are fit to intertain any Genteel Comp—

N.

Ha ha ha—Ha ha ha—Ha haha— Law busi: to be introd: always, fit to intertain all Comp. Ha ha ha— & take it Mr

R yes take it &c yt a D. Imp: Fellow. I say no such thing &c— ~~You~~ But an Adv: must be acq: wth all kinds of Polite Literat: &c &c

N

No tis enough if he knows the Laws of his Country—

R

Then just as well may a Man be a Physi

if he knows the Receipts in the
Dispensatory — Hygot: Eloquence
Composition de Public Speak: or

H. S. N.

Pringle in treating of the Bilious
Fevers has been very accurate and
particular about the Remote & the
Predisposing. & has touched on the
occasional Causes, but has said
scarcely any thing on the Proximate
Cause, nor given any Ratio Sympt:
thinks the Acrimn: of the Bile is ra-
ther the Effect than the Cause of the
Fever — Lancisius Dejections —
Hippoc: Epidemics. L 3. S 3.

Obstruct: consequent of Remit and
Intermit: Bilious Fevers. are chiefly
situate in ye Liver & Spleen Vol. 2dly.

Spontaneous Gluten
Pituyta
old People. Humoral Asthma Opodel.
dency. Flesh & Meal may be boild is
own to Glue. Beer Glutinous Water &c.
ot.— Putrescent Acrimony
uses &c. Putrid for want of Broad
Vegetable Alkalis by Neutra-
ing all the Acid taken in —
o Chyle. Milary Fever a kind
Putrid one — d Woman dreveling
Putrid blood from the Mouth &c
roceeded from the retention of
e Placenta 4 Weeks —
Roman Vitriol the best Antisep
e Cakes of blood on the Lips
Sure sign of Putrefaction. A
hild cured by Roman Vitriol —
met. tart. ℈ij weaken the Effects
f one another. Rom: Vit: tart &c
a ℈i Calx Antimon.

Of Fevers

Great Terror almost a Certain
Sign of Death unless in Nervous
Fevers. Hence Signs of an Affected
Brain or Nervous System are very
dangerous. The same is the Case
regard to the State of the Lungs - T
Pulses to & Respiration - Respira
Luctuosa Malum - Great Aversi
to food bad. & vice versa. Cure
No Medicine equal to Jas Pow
or some analogous Antimonial
Cooling Sudorifics not to be g
till after the 3 day. all Antim
nials should be given before th
time when they have the most vi
lent fevers. otherwise they run
to the 8th day. Tart. Emet: Gr
at 24 hours distance answers b
than Gr ß every 8 hours. Emet: S
doses of every kind succeed very

Opium with Ipecac: or Veratr:
Ol Anis: the best of Sudorifics
must drink 2 or 3 Quarts wth it.
never fails to Sweat, whereas Ipe
or Verat: are often thrown up ag
Pultice No 35 good in the Gout
as well as Rheumatism — Ol Anis
seems to have something of Anod.
Effects. Case of Cancerous Uterus
ʒß does not heat so much as ʒ
of Spec: Aromat. Does to be giv
wth only water & Sugar. the Bark
almost always prescribed at the E
of Rheumat: especially when the
Urine deposits.

Small Pox

Razes the first who wrote on it.
Inoculation 1st performed in 1712 at
Constantinople Mercurials & Anti-
moniats Specific in [illegible]

the Salivating Wards at St
s Hosp 15 years since any had
had 25 since any died. No Pus-
les where there was a Merc: Hais
Merc: Calcinat: till the Mouth
welld. Huxhams Essence of An-
mony the usual Preparative in
West of England. Bring the
ody to a State of health as near
s possible before you Inoculate
Be carefull not to Inoculate wth
trid Matter. A Little Blister
e best way to give the Infection.
events the bad ulcers. In Purples
would use Tart. Emet: Roman Vi-
triol ad gr-

Circulat. Causes. Composit: of
the Circulat: fluid. Probability
the Heart: of the Arteries
Propr: of the Atmosphere
Oil: Earth: Alkali Salt.
Serum. Consists of Alkali
Lymph: Salt. Component
a Red oily Particles: Anal.
to Cream Curd & whey —
Alim: oil Mucilage: Water Muriate
the more Nourishing.
Cream joins with the Curd as the
red Particles with the Compo-
nent.
Diseases of Nutrition from too
much Component
O.S.
When there is an overfulness
of blood V.S. promotes the
Circulat: otherwise always
impedes. Rolling Pulse not
beating because over distend

hence the Artery dos not re:
oil & consequently does not
propell the blood forward
and will be remedied by V.S.
In all other Cases it weakens
the Circulat: because the
b— flowing into the heart
is the Cause of ~~the~~ its cont:
it lessens the Heat. Rub:
Sticks beat Mettle on an
Anvil. Exercise occasion
heat & Swet. Usefull in Fevers
it thins the fluids as the Crass
most Elab: & by lessening the
quantity too much Dropsy
follows. (the Diseases) where
it is of Use) in Plethora. When
the impetus of Circulat: is too
much encreased. & when the
fluids are too dense

Signs of Plethora. Blood
Dense & rich. Strong & Robust
Constitution. Oppression at the
same time. Subject to Evac=
uat: as Piles & Signs of Evacu
ed Circulat. Strong Robust
not Aloes: Nervous Persons
Weak Person have with Nerv=
ous & Putrid fevers. V. S. was
ded good in any other Cases.
In London there is always more
or less of a Putrid tendency in
fevers from the Air - More blood
in the Country. of the Quantity of
blood by V.S.) less in L— than
in the Country. Safest to draw
too little. for we can always
love the Pulse but Vice Versa.
makes little odds whence it is
taken. The Antients ignoran

ow by way of Revulsion or drawing humours. Galen wrote much on this subject whose opinions prevailed for 1400 y. till harvey. Tho it is immaterial where you bleed, yet must give into long established Customs: as from the foot in Obstruct: from the Jugular in Affect: of the Head. Remember V.S. must always do good or harm. Of little Service in Preventing Diseases as in Spring or falls & is the Cause of Paralytic Complaints in the Advanced state of life. Does not prevent fevers unless Plethoric makes them dilicate. Nat. relaxed.

Vin Ipecac: ʒss ×× E.G. Acts much better after V.S. Critical days, we have 4 different ones in 2– before the end of the 7 & begin: of the forth but never between that & the 8th – & if not on the 8th or 9th not till the 14th or 17th none between the 17th & 28. Strong Constitutions stand the best chance in fevers – Putrid excepted – the dry fever most freq.t in London – In Nerv– fever 2 bottles of Wine have been given in 24 hours – Pulv: e Chelis or Sperm: Ceti w.th the Yolk of an Egg & some simple Water are good Placebos;! Cure of Symptoms of V.S. increases the Heat of a Putrid Fever, is only relieved by Sudorifics & Cardiacs. The Red Coral Draught is a better Antemet than Neutrals;!

Nausea in the begining of fevers
should always be cured by an Emetic.
Sal, Powders injurious in low fevers
because 4 times in 7 it brings on a
Purging. Bark Clysters of excellent
use in Diarrhœas Putrid &c with
Tinct: Thebaic: - The Bark succeeds,
as well in fevers where there are pro
fuse Sweats as when there are Inter-
missions. Always to be avoided when
the Skin is dry. — Mithridate a very
happy Composition - ʒss containing
1/8 of a Gr of Opium is equal to Gr ss
Confect: Card ℈i Mithridate ʒss
M. Sal Sedativ: Gr xxv - loses
its Effect if repeated. Opium excel-
lent in Spasms in fevers. Passion.
&c

Inflam: Nerv:

The only difference between Inflam: & Nerv: fevers is in the Constitution. V.S. will reduce an Inflam: to a low nervous. few of the * in Lond: of the last in the Country / Saffron & Castor have none of them the biting quality & therefore are not Cordials. Dr Oldfield at St Thos Hosp: gave a Man from Saffron walden in Essex ℥ij at a dose ℥ij the one day. in a few days took [illegible] Several Drams of Castor have been taken without any remarkable Effects

Nervous fever not terminate before the 24th day—

The Bark Astringent Antisept: Cord: Diaphoret: Alum ʒi & Nutmeg ʒß Alum Serpent: Ginger. Chamomil: Bark in the beginning of a Int excited Nausea & Vomit: Nerv:

In Weak Pat^ts will cure in & out of the Fit when it will not only out of it.

Roman Vitriol Gr. i, to iss cured 2 women in Middlesex Hospital the very best Medicine in Epilepsies Cured 100 in Intermittents. Gr. ij at Gr. ss between the Paroxysms. Is a Specific in Uterine Floodings Give it in the Saline Draught in Intermittents.

Old Hock is the best Cord: Anti=sept: in Putrid fevers. Whey made with Rhenish best. Saline Draught with Confect: Cord: in Rheumatism Ol: Anis: c̄ Sal C.C. Gr. viij.

The Membranous Parts the true seat of Rheumatism. Acute seldom ends in less than 20 days. 3 Months if we bleed too free. Ward who was famous for Rheumat: nev: bled [illegible] gave

Plethora owing to the Quality & not the Quantity proved from the Subjects & if lbs of blood was taken away it would soon be supplied by broths a Purgat: of Elaterium has drawn off 12 Quarts of the Serous Juices. Sudorif: do the same. it is only V.S. that lessens the Plethora. Various Diseases [illegible] Apoplexy Obstruct: Menses &c we know the treatment of by knowing Internal Inf: are Painfull: we see it in the External. Symptoms in External we judge by the Sight but must have recourse to others in the Pain mostly a Sign but the Brain & Lungs are void of Pain. In the [illegible] Intest: Kidneys &c excruciating. Pain equal unremitting, throbing heat &c. quick Pulse. Equal to distinguish from Spasm. Instance in a Young Lady from the Country sa

Opium Gr x & white Hellebor: Gr iv. Wards
Sweating Powder with Neutral Salt
or Sal. C.C. good in Rheumat: Pains
Rheumatism lays the foundation
for many Spasms of the Viscera.
Stimulus the Cause of Inflammat: A Thorn
in the finger produces an Inflammat:
of the whole Arm. Paronychia the Same.
Internals only Obstructed Perspiration.
Patnts always remember they have been
exposed to cold. We don't know how
cold produces Inflammat: Constringe the
Vessels. Acrim. fungous: Particles which
is not material. since we know the
fact, & that Sweating Cures. there is
certainly a Stim: either retained or
absorbed. Proximate Cause
Boerhaave Obstruct: Cellular Memb:
the seat of Inflammat: Haller an Effusion
of Blood in Cellular Membrane
open a Bile before ripe & nothing but
blood comes out. Redness from the

bad blood under the Skin. Stimulus
Pain Pulsation from the Stronger
action of the Vessels. Heat from
attrition. Quick Pulse from Irrita
bility—

Blood Extravasated by the in=
creased action of the Vessels.
Suppuration from Putrefaction
Resolution from Absorption
the Intestines soon Gangrene becaus
disposed to Putrefact: Internal
Supperat: occasions Hectic Fever
Vomica
Cona Phthisis, Empiema, Abcess
of the liver &c— Cure by Resolut:
From the P. Circulat: too rapid
V.S. the best remedy. Countract the
Effects of Cold by easy Sweat but
Beglivi says this cant be done
without V.S. the Sudorif: of the Anti-
ents all Heating— which is the reaso

when they could not have advan-
tage from any Sweats but thon that
were natural
All Emet: in small doses except
Vitriolics are sudorif: Ja! Powd:r
Ipecac ʒi Gtt XX every hour. is
a Powerfull Sweater Squills
are Sudorif: & also white hellebore
excellent in Rheumat: Tinct
Veratri given as Ipecac: with
Opium these are Wards. these do
not heat in Violent: Inflam: fevers
may be given in Olimsis for a uni-
versal relaxat: eases the Pain so
that they Vomit without Pain

Small Pox

The Merc: Calcinat: Tart: Emet
& Calx: of Antimon: I generally
give in the Variolous fever—
The Stom: Intest: & Lungs are
beset wth Pustules when the Patnt
is ill— Chiefly dies, except when
from Petechiae, with an Impos-
tumat: of the Lungs. V.S. is some
times of Service. before the turn
a blister to the back afterwards
to the Leggs, Arms & feet to
promote the Swelling, Purga-
tives to be as Retarnt avoided tho should
keep the Belly open wth Mag-
nesia. Tart Solub: & such like.
Expectorat: as well as Salivat:
necessary to perform a Crisis of
the Pustules in the Lungs.
Diarrhoea in Children. Mercury

might perhaps promote the
Salivation

Morbilli—

affect the Cuticle Internal &
External. Eyes Nose &c. Cough
is a Constant Concomitant
Erupt: have broader bases &
are not little knots as in the
Small Pox. All die Peripneumonic. V.S. & Sal: Powder
the only remedy Headach
Intermittent. Bark with Valerian will succeed when alone
it will not. Ol C.C. is of
great use as commended by
Hoffman in Intermittents
Snuffs of Candles wth N.M.
a Specif: in Intermit Headachs— Serum astum ℥ſs.

Venereal Patients always
grow Sallow & are Emaciated
Riding. Sour or foul
Stomach a pain in the Eyes
a Vomet

Palsy

The Electrical Shock always
are when the Cause lies in the
Coats of the Nerves nerves in the
loose Hemiplegia
Case of a Girl in Madison Ill.
with a Paralytic Arm when Cured
the Inferior extremities became
Paralytic Cured by the Cold a
Warm Bath & Oil Enema
vel of Palma Christi Oil
promote Stools in the Dry belly
ach from Lead or when worm
thing else fails. a Blister too

should be applied to the Pit
of the Stomach.

It Vitus Dance

By Denham always Cured by
Vis purging Med by the
Cold Bath & Chalyb: &c;
Smyth by the Bol Jov: & Vit:
Vomits.

Catalepsy

The Case of the beautiful Miss
Hanley in Ofex & the Young
Lady in the Borrowstowness
extraordinary—

Epilepsy

In this the Animal actions
are exerted wch is the reverse
of what happens in Apoplexy
Convulsion — admits of no
Cure — O Deus Domine Deus
bright—

Opium the best remedy to
prevent an impending fit —
Period: Madness cured by Dr
Battie wth the bark. why may
it not ~~cure~~ Period: Epilepsy —

Itch

℞ Wards white Drop ℥i
Aq: font ℥vi Part affect
applicand: — Lime Water.
80 gtt & an inject: for a
Gonorrhea —

Pus Acrimony, Irritab: Phthisis
Circulat: Sang: 1619. Harvey.
a Hydraul: Machine. before
this time the theories very defective wch shows its utility
and therefore their theoret: were
very absurd. but they are usefull
for their facts. Jallap & Purges. V.S
usefull in fevers. Crisis in partic: Cases by. Sweat Stool,
Urine are facts will always
hold. but not theories. we see
the use of discove the Circulat
~~at idem Heart~~ Describe. &c —
the Course thro Arteries & Veins
Valves. From anatomy of
the Heart & Arteries & Veins
we might judge of the Circulat. Right & Super: Ventric

left or inferior Arterious Valv;
Venous Valves: every Artery in
the body a branch of the Aorta
Use of the Auricle, to Collect
the blood, when the Valve of
the Ventricle is shut, till the
Ventricle empties itself. We
may therefore from Anat: judge
of the rout of the blood. &c —
We shall next endev: to acct
for the Causes, of the constant
& reiterat: Contract of the ~~ant~~
heart, All the theories till
within 25 Years. absurd. Mon:
disclaimed his acct. White is
the first true inventer follow
by Haller: Prime Line:
White consid: the heart as
a hollow Muscle: open the

Heart of a dog will soon
cease to contract. Cut out
it contracts. Prick it
from the influx of the blood
Satisfact: conclusive. It
continues as long as life &
life & excitability the same
Relaxation from the cavity
being emptied which closes
this filling the Arteries is
the Pulse. We shall next
for the Circulat: from the body
to the Extremity. It has been
that the propell: force of the H.
Friction. Elastic: proved
from the Arteries of an Ox,
3/ of blood thrown into the
Artery. Heart contracts. Artery
dilated.

Pulm: Art: pushes on to the Veins. Pulse of great use in disorders: in fevers questiond the Essence of it. in bed without asking a question &c. several kinds of Fevers. Inf: & Nervous Hectic: Putrid: 1 Strong full. 2 low: quick. 3 with signs of Putrefact:

When there is a full = in great qtty weak: contra. & the vac:

2 Stimulat: Acrimony. or increast irritability —

Bloods motion thro the Capillaries where no Pulsat:. indebted to Dr White Oscilatory Vibrat & Contract: his Words. vide.

The Heart not the sole Cause of

the Circulation but the oscillat
motion of the small Vessels
& thus the Veins are supplied
adequate access & Ascent: &
Pressure of the Circumambient
Air: and Lastly in the Veins
are impulsy. Muscular Motion
not sufficient, sleep: Respira
of Air — On a square inch Body
a Plate Press to the Table
Globes Pressed together. Flask
in vessel: broke. Barometer
to 30 Exhausted
20 inches. Water 30 feet
on the same Principle. Blood
goes thro the Veins. Exercise
conduces — Have given an Ac
of Circ & Pulse: Causes —

& if you can keep up the
fever to the 21 day it will
either terminate in an Inter
mit: or

In London they are chiefly
14 day fevers. Syllabus.

I am an Enemy to a long Passage
of Sympt: & where I find
an Author take up 4 or 5
Pages with them I think he
rather wants to confuse than
instruct his reader, ~~it is~~ so
many of them are common to
all fevers. it is suff: to attend
to the Pathognomon Sympt:
an Exper: Physcit: never asks
above 5 or 6 questions –

Amongst our acquaintance
we can always tell what
fever they will be seized with
Dr Lees visits Monday —
We have before laid down
the Diagnostic sympt: In a
Nervous fever the pulse is so
low & such flushings —
the Insf: pulse may easily be
changed into a Nervous, by V.S.
the Love greatly disturbed
by what was before said &
Sylab: —
In the Low Nervous
Sylab:

Lecture 24

In our last. the Diagnos: & Cure of acute Inf: & low Nervous. & one relaxed fibers, tother rigid One comes on violently the other 2 or 3 days a forming. One is to be treated by Antiphlogist: other Cordials. Inf: & Nervous are not well denominated but~~[illegible]~~ should be rather distinguished by the days. e.g. 8. day. 14 day &c & Huth often observed this rule on these days should favour the Crisis by Antimonials.

Intermittent fever — is when &c. It is difficult to account why Inflam: go on continually till they come to a Crisis & then good

entirely while, intermittents
wch seem to be as compleatly
Judged return again.
The Cause of both is Could es-
peciall joined with ~~Coulde~~ Moisture in the
Eart, hence low marshy Places
are subject while Towns & high
Countries are never frequented
by them. Moisture at any time
& in any Place will produce
them hence Spring & Autumn
produce them Cure Syllab:
We are indepted to Sydenham
for the present mode of giving
various methods have been
used Dr Pitcairn Cortex ℥ss
Vin: Montan: ℥j. A Decoction
of Bruised Bark ℥iij gave
within the Hour -

ʒß every 3 or 4 hours is the common way of giving it 11 or 12 drams should be given before we can depend on it. Dec: Cort is not to be depended on unless you give ʒij at a dose, altho' it will probably answer as well as the Bark in Substance. if it Purges tinct. Rheb: should be added, if it binds Rhubarb: we often Premise an Emet or some Stom Purge. Bark joind wth Sudorif will often succeed better wth Sudorif

Cor: Peruvial: aa ʒj

Limon: Succ: ʒvj

Vin: alb: ℥jß. for the Night Draught

Bark in the Parox: will not sit upon the Stom: an act of Nausea. In fit stays heats the Patient & may change it into an acute contin. fever. but in some weakly tended Person it will promote the Crisis & cure when it wont out of the fit, perhaps there is not a Compleat Crisis. hence Dʳ Pitcairn has given his Dose just before the fit, & tho it increases the Violence of the fit it Cures " Some have a tendency" ... " advisable"

Sometimes we find the Bark wont do. then we add Snake root or Sal Chalybi~~tes~~ sometimes with Success

Myrrh: Camph: Serpent: & are
sometimes prescribed L— is omitted

Lecture 23

In our last finised fever
name of others

Rheum: an Affect: of the Memb
& Tendinous Part, of Muscles
Ligaments Periost: Lumbag
Sciatica: the Stone: Intest
& Bladder. I have known
diseases from Colds of this
kind. even like the Stone
Cause universally Cold.
two Species" Acute is a begg
Rh Pain
Rheum: is the first. Advance, no fe
ver—

Cold applied when hot with Exercise the most freqt Cause of Arthr. e.g. Cook Maid, hot room, Cold, Cure. first Symp. Stiffness, Pain, Ancle knee, hip side. flies from Superior Limb today to the Inferior tomorrow the best remedy for the Stiffness is the warm Bath. We bleed but not so free as Sydenham did least we throw into the Chronic. Blood always sizy but this is no rule. Case of Dr Fothergil. will continue as long as the Pain & fever in very Strong Person. we bleed 2 or 3 times but often not at all

Sweats. these are very serviceable & they easily fall into them from the common Diaphe We give Opiates very freely tho some Object to them Wards Powder &c N° 34. Tid. Ol. Anis: is the only one tho that never failed me. ʒiss does not heat as much as we would imagine got it from Mr Wright treasurer of Middlesex Hospital who got it from a Quack. Should Drink freely after it. it has never failed to throw out a Sweat. Has too consid: Anod: Powers. Succeeded in a Woman with a Cancerous Uterus when

Opium failed, gave no relief till the last. in some Chronic Rheum: it is serviceable
Leeches are often usefull applied to the Part in Acute.
Rye Meal ℔i, Yeast ℥iv
Salt ℥i: the Hessian Poultice
in Rheumt, applied as a Paste
In these Rheum the Bark is
indicated. Rheum: Pains
worse at Night in bed, not
from the rarefaction of the
fluids. but something Periodical. [illegible] If you give Guaia:
without the Bark. it will
be often lengthened, sometimes
to 16 weeks.

Indeed if it is once Confirmed it generally last 3 weeks then be sure to give the Bark

Chronic Rheum: all Stim wch excite a fever help the coction of the Humors. the Bark is especially usefull.

Patits are very subject to returns the Bark, Exercises & the Could Bath the Best Preventatives Lumbago, Sciatica & Arthritis vaga Cured in the same manner. Lumb: the Tendinous Aponeuros: of the Loins known by making the Patit stoop. in the Nephritis & Stone this does not hurt

unless both are combined
wch often happens from there
not being a sufficient Congery
of the Muscles on the Kidney
to fore on the Gravel. you
may by this disting: from
Tabes Dors: Pain from Fluor
Albus Sciatica there are 3
kinds, where there is a Numb=
ness in the Thigh, the Coat
of the Nerve seems Affected
difficult to Cure when
matter is lodged in the
Capsule of the Joint, incurable
Arthritis Vaga may last for
years. Treated by Bark Cold
Bath & the Antiscorbutic

Lecture 24.

Small Pox a Disease of the Infect
kind not natural to the human
const: we have the first act
of it in the 8th Century Rages
the first, then Albucasis &c Hip:
Galen, Celsus, Aretæus &c make
no mention, no Compt, nor Epigram
in Latin to Ladies record, as
that that, wit & humour &c
the infect: Effluv: may be carried
1000 Miles by Cloths, Cat Boys,
& an Argument for Inoculat: People
wont give the Disease till God al-
mighty sends. & but then God al-
mighty is often an old Woman. A
bad way of receiving the Infect: by

the Lungs. ferment: Vide Syll:
the Cooling Plan in Spox after
occasions Defluxions on the Lungs
& brings on Consumptions. then the
old Regimen best. When a Putrid
fever attends the Small Pox not
1 in 100 recovers, should be
treated as a Putrid fever. if
there is a Stinking breath at
the beginning you are to appre-
hend P: fever. Cure. Antimoni:
Powder excellent if Inf: Sympt
attend, by sweating without heating
& carrying off thro the Pores
the 2 fever is not necessary but
Symptomat: arising from the
Suppuration of the Pustules.

Opiates are of great use by giving rest when the Suppurat: goes on better. 3 Stage when the Pustules are compleatly maturated, when the body is covered by a Purulent coat of Matter. when the Pus is absorbed is apt to fall on the Lungs where there are Pustules or Obstruct: are formed. & a Peripneumoni: carries of the Patt this is often prevented by drawing off the Matter by giving a Purge. but it must be a very gentle one Blisters seem more to be depended on, wch I would make it a rule to apply to the back the night before the turn. the Epithem vesicator: is best by being soft

falls in between the Pustules
& Vomit (Dr Mead) may draw
off some of the humours by the
Stomach. Vent: more by evacu=
ating the Phlegm from the Lungs.

Syllab: Of Inoculation

We are indebted to Lady &c
for introducing it. her Son in
Turkey Lady Bute the 1st here
Royal family before inoculated
6 Criminals 5 who had not
and 1 who had had it were
inoculated. the 1st did well the
2d had it not. The great
secret is to keep them from
Flesh Meat, as well as cold
Air. Veget: Antiscept: food

they give Mercury. there is
something opposite to the Small
Pox. 15 years since any had it
in the Inoculat: Wards. and 25
since any died. one with the
Merc: Plaister had it very
full every where else. but
none there. a hint to save the
face of a fine Lady.
Infect: may be rubbed into the
skin, but a little scratch wth
a Lancet dipped into a Pustule
is the Usual Method. I advise
a sore to be made as it may
evacuate part of the disease
a Little Blister as good as any

It is better to keep them in
than rooms tho cool as the
Respiration goes on better.
Weak State of Lungs after
is the greatest object to fear:
as the disease is apt to fall
on the weakest part
"Measles" all who die of
them die of an Inflamat: of
the Lungs: is a Disease of the
Cuticle, external & internal
Lungs, Sickness of Stomach,
Diarrhoea a little before it
will Pox and Coughs in the
Measles always, always bleed
in the last when Respiration
is on the Int: Membrane

Lecture 25

Have finished the Principles
have only to put them into
Practice. Inf: & Spasm the Chief
Head Ach" the seat. various"
s Cause Plethora, from the Stretch-
ing & distent of the Vessels. V.S.
Rheumat: in this Case the Pain
is chiefly in the Occiput: lasts
for weeks or Months knawing:
Cure No. 40: Intermittent: Period
frequent. begins in the teeth
temples over the head & is very
diff: to cure. Urine Pale during
the fit, then deposits a Lateritious
Sediment. the Bark often effectually

but will fail once in three
times. often incurable Case of
Mrs Lawrence in Bishopgate
Street. took Zoij ʒj every hour
and continued 3 Months. all
to no purpose. was then cured
in a weeks time by Snuffs of
Candles. With Antimony is
held a Specif: for Agues.
I was curious to know how
they acted, & concluded that
they acted as an Empyreumat
Oil as Ol: C.C. Dr Pearson
& I looking over Hoffman
found it an excellent febrif:
is used very much in Spasm:
& in all Spasmod: Compts

Epileptic: as they give an exceeding flow of Spirits. the Ol: C.C. used for them. Mr Smiths Case. Bark with Valerian will sometimes take Place when the Bark will not give it in Decoct: Some times Antimoniat must be given as Serpentar:

Rx Ol. C.C. Gtt xx
Valer: ʒj
Smyth

Rx Spt: Mind ℥ss
Vin: Ipecac: ʒj gtt 40. Whyt

Cured by sweating wth a Draught Dovers Powder Ol. Anisi ʒj

Venerial Head Ach. one Symptom of a Pox from Nodes may happen

without any other Venereal
Sympt: Gentleman Salivated
& after: had a head Ach: ie
[illegible] after Spont:
a Person Not well never be fat
& is always Salow: is to be
Cured by Mercury. 4th friend
Sasmod: Contract: i.e. Persons
who Study hard most subject
viding Bark & steel the
Cure:" Foul Stomach:" the
seat in the Forehead. Eyebrow
Eye ball. Cured by Vomiting
whether natural or forced
Case of Mrs Frasey at Mr
Bedords benefit at Hamstead
<u>Phrenitis</u>" is a Inflam:
of the Brain: occasions ~~an~~
irregular distribut of Nervs: fl:

is an Acute Disease which
distinguished from a Mania
this too comes on more gradu=
ally, while the other is sudden
An Erysip: in the face repelled
after the Cause. Hippoc: Aph:
& Pinel: Phrenitis mallum

Lecture 26th

"The Phenom: in Apoplexy"
A Short Diagnos: but Perfect:
When a Patient in a fit are ap=
parently in a deep Sleep
Apop: & Epilept: easily dis=
ting: tho often Confounded: in
one violent & convulsi Contract Struggles in tother
none. Scratch Slaver &c. Lucid

ave as diff: as it is possible
to conceive. Causes. The
immediate is a Pressure
upon the Brain: divided into
External & Internal. The
first comes under the Obs: of
Surgeons. Inter. Extravasat
of Blood Lymph, &c
Story of the Woman at Paris
that Judged Adams in a Crowd
Her Brain & Coverings com-
pletely fill the Cranium
therefore if blood &c is extrav:
will occasion Compression
In the Gazet Rob: by authority
extravas: blood as large as
a Pigeons Egg was found
Person subject to Vertigoes

or Giddinesses after die
apoplectic. People of short
Necks. opposite to the long
Necks Subject to consumptions
Sanguine; Pituitous, Spasmodic
last doubtfull. when Persons
fall down from a fit of laugh
ing &c — Rumination the
Sanguin: & Pituit: term: ended
in Death or Palsy. all who
die die of a General Palsy
of the Heart &c if they recover
always a Hemiplegia, you
may always Diagnosticate
& it always is of the opposite
side to that of the head wch was
affected with Pain —

& the Muscles of the face will be
drawn to the Sound Side.
Nor are the Senses sound
their Memories are generally
impaired. & after every fit
grow worse & worse Cure
We need only refer you to
what was said under Plethi:
& Situations Sixth &c. there are
few recover from Sanguin
Apoplexia: ~~from~~ this attacks
the Young Plethi: healthy
Patient: the Old weak: &
they often recover but with
the Loss of one Side. 3. 4. or 5
fits. few live above 3 years
after a fit. An Impoverished

old Practitioners has remarked
that those who have been fond
of V.S. in their Youth are Subject
Young
to Apop: in Old Age. In Plethoric
Apop: bleed but sparingly

In Apoplect: V.S. are non
movet occidit (Hipp. Aph:)
The transit. easy to Palsy
from Apoplexie:

Palsy is a want of Nervous
Influence derived to a Part:
those who have Paralit: Compts
come on Gradually, if they had
no Apoplexia: before, generally
die by a fit at last. wch shows
that the Cause resided in the

Brain but Part: Palsies
are owing to some Compress:
& Obstruct of a Nerve & not
in the Brain. Mr Davis Stew
ard to the Duke of Bedford is
the only Case I know of a
recovery from a Sanguin Ap:
Much has been said about
Electricit: in Palsy. I never
knew it of use in the true
Hemiplegy: where the Cause
is in the Brain, but often
where there is a Part: Palsy—
exceeding great Advantage
in this Case. Blister ap
plied to the affected Part are
useful

Lecture

Cure of the St Vit: Dance
in all Diseases of the Head
should begin wth Vomits:
White: Vitriol: ℈ii:
Dr Mead. thinks it Paralyt
& orders Cold Bath & Cha-
lyb: Anthelmint will often
cure without the C. Bath

Catalepsy I have not
given the Indicat: of Cure
because I dont know. Shall
be satisfied with describing
it & informing you of a few
Cases I know: describe-

You may Place them in the
form of a Mercury. the first
Last Letter for a few Mi-
nutes & 2 D. or 4 or 24
hours.
The first Case I saw was
a Lady I. Orphant had
a Suit at the last Does
to make her fortune. She
Law Suit at last a Ca-
tastrophy. in wch She wound
from 2 to 3 hours

did Vol: schied:. Another then tried Electricity but had no Effect: till the head was shocked. when She cried out She was Shot & She became Paralyst: & was entirely unsensible in the Inferior Extrems:. then Ordered Mustard Poultices, made of nothing but flour of Mustard & Vinegar. Also with water would have been strong & did not Blister the least nor Did Plaisters of Cantha ordered then i.e. Episp: all along the Spine from the Nape of the Neck & then

She recovered Slowly, but for a long time subject to be faint tho got well in 12 Months. I Crooked & Subject to Nerv: Comp: 2d

Mrs Hoole in Essex Married at 17 a Very fine Delicat Woman never well after leaving Rumford. one Night at Supper Seized wth Hyst: fits. Ant Hyst were tried to no Purpose I ordered the Nedle; they thot She was dead but on feeling the Pulse full & Strong. She would remain in any Position & remained

in any Posit. contin: ½ an
hour then they returned
Period. & as she came out
of the fits was violently de
lirious. between very low
but would eat roast Beef
on the coming on of the fit
Dr H & J. D. order'd Tart. Sol.
Gr xv every hour wth Op.
& Camph. to no Purpose.
then gave the Bark but
time was of more use
when she could ride it
was of use. left her with
an Intermittent wch contin
till within a fortnight

a suspicion is better
die Apoth: in Harford
Cured by the Bark. Would
always give the Bark

Epilepsy: Cant Explain
to satisfact: for want of
suffic: Data. is of the Con-
vulsive kind & differs
from Apop: toto Cœlo.
Causes. Heredi: admits
of no Cure & seems to be
owing to some injury of
the Brain rec'd in the Birth
generally become Idiots.
Idiopathic not born with
but owing to some Accident
Cause is sometimes but not

often Cured & terrors is the
most frigt. Cause. A Girl in
the Country strong & harty
Was remarkably fraid of a
Toad: from one her Sweetheart
threw into her breast fell
into a fit & has them once a
Month. Con: of Mr Hoyburns
Servt frightend from her not
being able to lock a Chest
A Gent: now in Scotland who
wth his 2 Brs were in the Rebel:
his friends bloody head was
shown him wch threw him
into a fit, wch as he recd his
Pardon now returns every

every 3 weeks & lasts a week: As it is a Period Disease should be cured by the Bark Dr Batties young Woman. Prognostics the older before seized the worse if young Puberty Cures. the Antients that Venery Cures a Man went with his son to a Bawdy house at 14 Y but tis not owing to Venery but the Robust Change in yr taking Place wch Cures. hence if they dont come on till Puberty the Advant: of this change is not had. Vide Syd. Dr Rutherford had 2 Patie

Used the Bath: & ~~Bled~~ Gave
Cephal: to the Cow, but
did not do altogether
the worth being allowed to.
Opiates sometimes ward off
the fits but 100 Gtt have
failed in Hogbanges & other Water
In General Bark & Strength
are the best: Vitriol per=
haps Acts upon the same Plan
& if there is any better than the
Bark: tis white & blue Vitr:
Cardamine or Ladies Smock
recommended by Dr Shaw &
in some Cases usefull, I
never had good Effect from
Valerian

Lecture 27

Nerv: Diseases

A 100 Causes may give a Mistress uneasiness & while that lasts we cant cure Could they have an easy happy contented Mind, would effect Cure. 10000 in the Lottery & intention of Cure. An irritable State of the Syst: disposes to Spasmod Sympt. Opium then usefull —

Inflam. of the Eye. The Importance of Vision. Opaque Cornea from various Causes Chrystalline Lence. a Paralyt State of the ~~Chrys~~ Optic Nerve when there is no Opacity.

a Species of the Iris which
occasioned blindness was
cured by Mr Thomson of the
London H: by nitching it wth
a Pair of Scissars. & of the Fis:
of the Eye. Scroph: Compts
especially in Children a very
freqt cause of Ophthal: the
Solut: Sublimat: Dulcorat or Vin: Ant:
droped into the Eye. In Vener:
Ophth: the quicker we relieve
it the better, should therefore
use the strongest Merc: as
Turpeth. Sr Jno Fielding,
When the Patnt is low wth
ophth from Art Rheumat
Cause. the Bark & Blisters
perform a cure when bleeding

a low dust did hurt.

When Specks are upon the
Eye, Powdered Glass does best.
There is no way to Cure the
Cataract, but by Couching.
Amaurosis. Gut: Serena.
because the Eye is Serene
owing to a Paralyt: State
of the Optic Nerve. Eagle
can look at the Sun beam
Nerve not Insetable. Owl
very inquit: have cant see
in the day. In Amaurosis:
the Pupil very much dilat
d. Changes in Dark or Light
If you cant make the Pupil
contract generally incurable
Is a Partial Palsy therefore

the Cure is to be referred to
that. Rheumatism a Cause
of Blindneſs. Case of a boy
Clock Maker in the Minories
who went to the Tower to see
the Duke of Cumberland. run
from the Tower Gate, thro St
George's fields, to Westminster
Bridge. Cold Applicat:
Case of the Man in Cheapside
who never took a holiday nor
spent a superf: Shilling. Cat
party Suppers. (Hondal Eat
out his own Eyes) After Phyſ
in Epiſ: & Hernut: failed
cured by the Bark & White
vitriol — [illegible] blind from
stud[illegible] [illegible] straining the Nerves

Lecture 28th

We are now to descend into the throat & thorax: Diff: kinds of Angina Inf: Scirrhos: Ulcerd 1st most freq: sore throats from Could: terminates by Resolut: or Suppurat: seldom by Gangren: generally Bleed then the Ant: Powder wch does not hurt tho it Vomits. if it does not it Sweats & Purges If the Irritat: of Ang: proceeds from Obst: Perspirat: Vomiting does not increas it. the first i.e. it is usefull: we then Purges, Blister & Gargle with Acet: Vin: & Spt Sal: Ammon

Volatiles are of great use
Dr Young of Edinb: Vol: lin
of Ol: & Spt Sal: Amon: Pring:
~~when~~ when the Suppurat: is
compleated bursts itself.
Laughing — Angin Oedem:
of Boerhaave
Aquos: a warm Stim: Gargle
of a Spoonfull of flower of
Mustard & water the best
Cure. Ulcerous Sore throat
Puzzled Practitioners. they treated
with Antiph: & they died. Dr
Letherland a Man of the greatest
Learning found that the Ital:
& Spanish Physit: described it
& treated as the Putrid fever
If there are red Efflorescences

on the Breast you may be
sure an ulcerous sore throat
there are also sloughs to be seen
in the throat. Should give
the Ant: Powder to cleanse the
Stomach & Primæ Viæ—

Peripneumony

Now of the thorax. Properly
speaking all diseases of the
thorax: but a call so Vera
Notha & Inf: wth fever. & other
without. & owing to Could.
wants Pain because the Lungs
have but a very obtuse feeling
hence in Phthisis the Lungs
may be half eat away without
Pain but we seldom have

Peripneumon: without Pleurisy
Fever: generally Pain in the
Side: terminated by Suppuration
Resolut. Gangrene. V.S. 2 promotes
the 2d. there is no true Critical
Solution but by Expectoration.
if there is no Expect: a Vomica
is forming. to promote Expect:
the only practic: treatment
to be used in Peripneumony.
as Inf: fevers wont come to a
crisis unless the fab: unpet:
is moderated, so neither shall
we have this Expect: if too
low: Cordials: if too high V.S.
Pleurisy an Inf: of the Pleura
Paraphrenitis of the Diaph:

they are the same disease, & the Infl: of the Pleura may be in either Side before or behind

Paraphren: an Inf: of that Part of the Pleura wch covers the Diaphragm. the Muscular & tendinous Part seldom Inflamed.

Perip: Notha Vide Syd:

Is the disease of old People on the approach of Winter when they Spit up a q^ty of Phlegm is a Chronic Disease. some have it for 20 years. those who have once had it young or old are liable to have it again from obst: Perspirat: repelled to the Lungs —

A Gentle Puke should be
given 1st then a Stom: Purge
No 62 - 4. Expect a hint from Huxham,
Where there is a Ropy Gluey
Expect: Opiates should be
avoided otherwise very useful
there is a great consent between
the feet & Lungs. a Lady
by Tin dust stopt the Sweating
of her feet & ever since has had
a Perip: Noth: every Winter. Shoud
therefore keep the feet warm
& promote the Persp: flannel
waistcoat: Bark: Asthma
proceeds either from Spasm or
water in the Cavity of the Thorax
when there is no Expectorat:

an Indurated state of the Lungs, is often the Cause of Asthma in this Case if any thing will be of use it must be Crude Mercury ℥ij have been take in a Morning with great adv: Dispute between Thomas Dover & Case of Mr Hore, Member for Hereford.

Lecture 29th:

the Pulmonary Consumpt: is very freqt & fatal in Brittan Endemial owing to the variability & changeableness of the Atmosphere there must be an ulcerated state of the Lungs. Vide Symptoms —

the first Matter in the Mor-
ning Purulent & will sink
in water. Mucus will not.
from the Absorpt: of Purulent
Matter Hectical Symptoms
flushings, Colliq: Sweats. & the
body Pines away. Cause 2. V.
where Phthisis is compleatly form'd
hardly Curable. may from the per-
pet: motion of the Lungs. &
tearing by the Cough. may be
prevented. Hæmopt: is a freq^t
Cause, either from extern: or
internal Cause. in Obst: Women
not so bad as in Men. from
a Dilated Vessel. Some Persons
are particularly disposed to
Phthisis. tall long Necks nar-

rous Ducts & Ulcered Scapula where there is a Sweetish or Saltish Taste in the Mouth seldom Cured. Haemopt: from Extern. C. bleed. then use Opiates because of their quieting. When from an internal Cause. where there is an Acrimon: State of Fluids, little to be done. let them drink Bristol Water. in Obst: Women, bring back the Menses & you Cure the Haemopt: Dr. Barrie relates Cases of the Empyema cured by the Ope= rat: & Cases of Mr Potts in Barthol: Hospital Phthisis after Peripneumon more frequently Cured than any other — Fothergil never give

them up when the Vomica
has burst. will sometimes burst
for: 2 or 3 times. 3 Scrofula
all these die Hectical more
save but one instance Cured.
Beglivi says the Parotid Gland
are always enlarged & I have
always found them die. treat
like Scrophula but we know
no Specific. Catarrh is the
most frequent Cause in Bronchia.
more than in any other Part of
the world. Mucidinous Membrane
is continued into the Lungs

Lecture 30th

Proceed Agreable.

We proceed to discuss of Stom
ach Intest: & Dyg: Apps: Shall
speak of Digestion. In the
Stom: Aliment undergo a Dyg:
resembling as we make Emulsion
of Almonds. then we first
treat of the Milk. such is
the Chyle drawn off by the Lact:
Veins and so they. according
as Animals are nourished so
is the Structure of their Intest:
as of Fowls that we Examin-
ed this. where it is rec into
the Crop. where it is macerated
a little. then it passes into
a small Gut into the Gizard

where it is ground by the
strong Muscular action, which
its internal surface is defen
ded by a firm insensible Mem
so that the Digestion is little
more than preparing an Emulsion
You may Cram Owls with meal
or Pollard without Gravel
because the Aliments are already
Ground & broke down. so
much for Granivorous Birds
Flesh Meat is easily Dis=
solved & broke down a Fu=
trescent, while Bone will lye
a long time, hence, Carnivorous
Animals have but a short Gut
of Intestines not above 3 times

their length. Graminivorous 6 times as long, so that you may tell by the Intest: what an Animal is to live on. We have another Sign viz Tushes to seize the Prey. A Sheep if She would could not bite you. the Human Species from their Intest: & teeth seem to have been intended to live on Veget: but use a second Nature. Our Stom: receive the food broke down by our teeth, & even the Culinary Art gave ~~us~~ some assistance in the Grinding & making into bread. Savages used to Parch

a house this Com. boiling
& roasting. when rec into
the Stomach ferment. first
dis turn in the Duod. meet
with Bil & Pancreat: Juice
& Like Mucilage mixed
the oily part together. the
watery are take in mostly
mesentaric. the Lacteals
the Capillary Duct absorb:
the Chyle recapitulat: our
in the Stomach. Now of De=
praved Appetite Read
Mostly owing to relaxation
as in a Chlorot: girl. Cured by
Bark & Chalyb: but sometimes
from bil Putrid humours, Cured
by Vomits Stom: Purges and

other Strengtheners. When
owing to the use of Spt Liquor
seldom Cured. because they le-
don leave it off. many who
were intended to live till 100
generally die by it at 60. the
Juices are Coagulated. Stomach
hardened. insensible, unless
wrought wth drams. Dissolved
blood from Putrefaction.
All we can propose is to re-
dress them as tolerable as possible
wch is best done by Aromatic &
Opiates mixed Cured

Lecture

Worms. cant be produced without a Parent Animal mere Matter cant Produce animal. a Horse Lyon may as well be produced. therefore we dont know how ~~they~~ worms are Produced. Mr Roumeur has taught how bots are produced for when kept a fly comes out, & this fly deposits its Eggs where is most convenient. there is a blow fly wch creeps up the nostril of a Stag & deposits its ova at the root of the tongue a huntsman observed the

in Spring & Summer. but
not in winter. Reaumur
observes that some creep
into the Anus of Horses &
deposit there. these prevent
the absorpt. of the Chyle.
Farriers give Decoct: of
Rue. Brine is as good
for the Bot worms as any
thing. 'Tis of no consequence
to Physic: how produced
but how Cured. Dr Nothrey
will give nothing but Fil:
of Tin thinking it acts only
by its mechanical Power
but Aurum Musiv: & other
Preparat: are Effectual

Dr Lewis thinks it acts
by an chemical quality
as it contains some. tis
enough for us to know that
belongs of him is an Excellent
remedy. & as good as any
Calx is prepd w.th Block
tin & Regulus of Antimon
but the last does not act
therefore Shrimps of a Nutt
Shell may be used
a Day may be used
Mercury. is Chimical to
Antimonial. Calomel with
a little Powder is as good
as any. Calomel taken

internally is too soon absorbed before it reaches the worms. Dogs & Cats may be Salivated as easy as men by Salivat: but ʒss of Æthiops in a day came thro & did not Sali: Sal Martis an excellent Vermifuge particularly usefull to Chlorot Girls may be given in consid: doses so as to Puke—

Sweet Oil. a worm put into it is soon convulsed & dies in a Moment but not in Water. Dr Wall

Bitters have nothing spe=
cific, as worms will live
for hours in the strongest
infusion. of use by strength:
the Stomach & Intest:

Piles used to be consid:
as as distinct: of the Hemor=
roid: Vessels Varise. but
is not the present opinion
but Blood in the Cellular
Membrane, brot on by Drast
Drug: as well as costiveness
Bad habit of body a cause
Fistula from neglected Piles
Cure vide Sulph looked upon
as Specif: in all Descript:

for the Piles but dont see
how it acts unless as a
Purgat: A Solut: of Vitr:
is the best topical Lotion
is the Quack Medicine:
Haemorrhoid Case is a
forig comp. Bals: Peru
w Vitel Ovi & 60 gt of
R Rheb: thrown up by Clyst
is the best Palli: but Merc:
alterat: the best cure Wards
Paste Balls owing to the
drying up old sores. &c
Cholic from Colombut is
an Affect: of other gutts or
diff: kinds. In Inf: Chol:

the Stone: is often bro't into
consent: when there are Bil:
Vomiting. there is also an
obstinat Costiveness.
Dry Cupping Glasses of great
use in Spasmod: Cholic:
Inf: Chol: the Intest: soon
Corrupt: a Hare Buck
the Guts in a night will taint
the whole flesh. Cathart: Med
will irritate the Inf: should
use the Castor Oil. & bleed.
Stools oftener a consequence
of the Inf: Abating than the
cause of its resolut: Ant:
Powders used as free as in

any Inflamation. Bals
Peru: wth Ol

Lecture

Lues Venerea 1st & then of the Stone. Is a disease not long known in Europe 1496 America found by Columbus in 1492 an touched at Naples in his return where it broke out soon after. in 1496. prevailed when the French Army besieged Naples & the Officers brot. it to France whence we rec'd. it. I diff. from Astruc in thinking it America because is not Natural or Endemical there. rather the Portugees who at that time made discoveries in Africa where many diseases & the

Yaws or are Endemical.
few escaped wth Life for want
of a Specific. not material
whence it came to. certain
it was not known in Europe
till this time, it would seem
it should not flourish here
since not natural, hence Dr
Astruc imagines it will wear
out it is certainly much
milder. at first all Poxed
100 years before there was
one Clap, 10 Claps dont do
so much hurt as one Pox &
one Clap then worse to the
Constitution than 10 now.
"The Lues" Is now always
communicated by Contact with

a Part where there is no true Skin. or a Cut. where there is the true Skin never communicated, Lips, Nipples, Genitale. the red Cherry Part is not covered with true Skin but Cuticle wch is continued thro the Stom: & Intest: a Gent Poxed a Lady for whom he had a regard by kissing. Case of a Physic: in Devonshire who pronounced a Lady Poxed from Ulcers & Erupt: about her face & throat. Poxed by her Sweethearts putting his tongue in her Mouth. A Grandmother who used to feed a Poxed child wth her Mouth Poxed. Another

Billing kissing. A Venerial ulcer in the Nose from Picking it after the finger had been in the Vagin: of a Vener: Wom a Woman Poxed from Suckling a Poxed Child, & recovered damages at Guild Hall, is mostly received by Coition where there is the Cherry Coloured appearance in both Vagina & Penis. is not necessary that there should be a coition, for it may be communicated by the finger in touching. Case at Mr Kensies. need not Emit. nor enter but came in contact. where there is any Part affected but the

Genitals it is to be consi=
Swell Testicle
dered as a Pox. Bubo or
Chancres may convey it into
the blood & is to be esteemed
a Pox. but when there is
nothing but a simple run=
ning does not require a Grain
of Mercury. Now of the
Cure of the two Diff: kinds
Of the first Infect: the Glands,
Penis being a Spungy Substance
absorbs the Virus. the seat of
the Clap in tuch from the
orifice at the seat of the
Glands. Dr Rutherford of the 2
ders it as an Internal consi
or Ulceration & treated as=

ingly by D.D. Purging & low diet. In London the Surgeons who have repeated opportunities of examining from Malefactors who die Clapt the Glands & Lacunae are only inflamed, wh invites the humours to the Urethra, wh occasions an Erection as well as Discharge. Chordee when the Corpus Cavernos Urethrae inflamed & distended Priapism when the Corp: Cavern Penis. There may be too an Abrasion of the internal Membrane without much Ulceration _

Cure. Sheath the sharp
Acrimon: Particles with Ol
the Spicula of a Viper may
be sheathed by Ol. Dr
Nichols 1st introduced it in
a Paper to the R. S. but was
rejected by Bishops. because
comm: only as a Preventa-
tive. I the first who used it
to Cure. Unctuous Applicat
of use in Sores. Dr Oliver
objected against Purges &
commended a Solut: of White
Vitriol. I found it sometimes
stopt the Running too soon.
then did not use it till the

12th day. the best way is
to use the Oil first, then
the Astringent Injectn: some
may be cured in 6 8 or 10
days. some not in less than
6 or 7 weeks. One object
to the Vitriol Injectn: is the
smarting. Wards White
diluted
drop is free from this &
ʒiss to ℥vj of water
answers every purpose. Ca-
lomel in Mucilage of Quince
Seeds is good. Oil should
never be used after the 8th
day it will certainly prolong
it. never to be used in Gleets.
of long Standing. Gleets are
all best Cured by Bougies—

Surgeon Hales says, they are
owing to Caruncles & nothing
else. Verdigrease ʒj to ℥iv
of Ol: Amygd: is a good In-
ject. for the same Purpose
Purgatives not necessary
many of the Cures attributed
to them would have run off
themselves by the Patient keep-
ing Cool & Clean —
~~[illegible]~~ Mr Chafey of Midd:
Hosp: in dissect: of a Patient who
died wth a Clap on him found
a discolourat: wch seemed to him
an Abrasion ~~to~~ Contrary to
Hunter & the other London Surg:
Reason. [illegible] being acid occasion

Fungus & Carnosities Cured bring on Gleets w.ch are Cured only by Bougies. Cure of Sympt: a Physit: at Midd: H: had a Clap & Cured it by injecting Warm Water only. Scorbutic Habits according to Hales are most difficultly Cured. Troches of Nitre with Sugar a Glass of Warm Capelaire good Diluents. Chordee is only a Partial Erection. Priapism is a compleat one. An Opiate is the best Palliative. in Phymos: & Paraphimosis have generally Chankers under, Cataplasms & Oily inject. the best Cure. Bark is not a Cure for the Clap. Case of the Man in St Tho. Hospital

Poxed, a telltale as it makes a Man limp & tells his wife. A Bubo I have known the first Symptom without any Gonorrhoea, wch happens from the Womans being highly Clapt with Chancres in the Vagina. Case of four in a house at Edinbury Poxed by one fine Woman. by Inoculation when a Woman quick in bed motions causes Excoriation. A Chancre as big as a Pins head should always be treated as a confirmed Pox. Oil is the only external Application. Astringents & repellents will always occasion Bubo or Pox.

Pox Mercury & its Preparations the only Specifics. Perhaps Arsenic might answer in some cases as I

have known of its alterative
quality from experience.
Salivation not necessary. it is
an accidental Effect of Mercury
for some want to salivate. Dispute
between Desault translated by Dr
Douglass: & Turner author of the
Syphilis. Hales cured both in
Carrs regiment without. Every
Saved Man lost to the Regi-
ment, for after Salivat: they get
could on Guard, & get consump
Rheum: &c. Merc: mildest Calomel
in general as good as any, but
Turpeth Min: the strongest is
sometimes necessary gr ij in
a day. A Young Buck [illegible]

Lecture

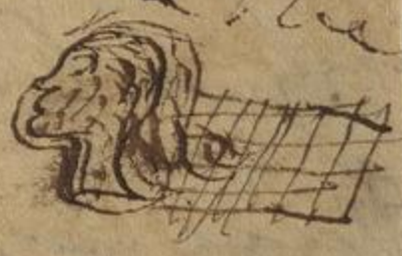
Hæmorrhag: Uterina

When other Styptics fail Rom Vitriol has failed.

Whites ~~[illegible]~~

a Yellow discharge joined to a Scalding sometimes happen in the Whites - Vomits of use only by Strengthening & Cleansing the first Passages. when there is a flux of Sharp humours Mercury is as necessary as in the Clap.

Psora



Itch communicated by Animalcule in contact Linnen not Woollen. - the blood must be impregnated by slow degrees till it become unfit for the nutrit of the Animalc: Ward's white drop, Sulph, & White

Rubbing Lime useful. Mange
in Dogs analagous to the Itch
& cured by Dipping into the same
Lime Vat. In Hides it are
not contagious Mercury is a
Specific. Bleeding & Purging
entirely unnecessary. Van Helmont
with all his Learning could not
cure himself of the Itch.

Elephantiasis —

The D. of Nam: or any Surface
may be passed upon, by apply
ing a Cauterized Towel to the
Face when hot. Arsenic used
to Pimpled Face when every thing
else failed

Diseases of Ambers
Acid dermoid.

Scrophula

Hereditary may sleep for 2 or 3 Generations, & break out in the next

Poisons

We scarcely know where to draw the Line between Medicines & them. The Corros: Sub: is the 2 Arsenic the first, now much used the last I have used with no bad Effects Gr. j. With Calx Ant: has been given. a Poison is only a Med: wch in small Doses has great Effects. & therefore bids fair to be an Excellent Med:

Classes 1 Caustic, from the union of Metall Substances wth the acids! 2 Opiate or Narcot: Poison

Opium, Strong Hydrocyanic
Acid, Nux Vomica
Acid, tongue Sac. Carc. Ind.
Wheat steeped in Port. Wine
Nux Vomica superficies Cranes.
Cocculus Indicus is often used
by Brewers. 3 Class Diseases
Bites. Symptoms violent headache
at the Navel Famine in Java
Cholera, a term the Late Sapre a
great Philosopher. Police for it
does not take any but beggars
& Class Morbus Stamus of
Sulph: Gas Solvent: Great Dil.
Cure — Cure of all to consult the
Doctor as quick as possible
Dilute, but Dilution will not
do with Navel Doctors you
will find it Diff: to make them

Vomit, but if you procure it it will
certainly Cure Slaves where ℔ ʒi
have been taken. Ipec: Vitr: Alb:
aa ʒij — Stromberg gave Ipec: ʒß
but failed. In the Bites first
scarify, then apply Cupping Glass
& then rub wth Adeps Viperar:
then Dovers Powder to Sweat.
Of a Mad Dog. Scarify, Cup:
or Blister to procure a Discharge
Pulv Antilyss: has failed, nothing
Specif: Evacuations the best
promote all. Dr Jas vomited wth
Turpeth Mineral. Ward's Sweating
Powder wth White Hellebore best.
Musk Gr xvi Cinnab: Nat: Fact
aa Gr xxvi to be taken at Bed
time. then give Pulv: Antilyssus.

last dip in the Sea. Merc: Oint
fail in a Gaol in the tower and
Dr James — No time for applying
any thing in various Stages —
Case in Boerhaave of Fumes of
Sp^{t} Nitr neutralised by Sp^{t}
Sal Ammon.

ime of blows Dr Lobbs method

rope over a Pully can't use it

may be used by stupid of all

l 15 Minutes, is ~~the best~~. Second

ding the best, as it may be perform

thout that expence of Spts as in

lking. the Shocks & comotes the

culat thro the Abdom: Viscera

trengthens; besides every Moment are change

atmosphere & ~~and are~~ diverted with a

tinual Variety of Objects, therefore

most perfect: it cures Diarrhoeas

gings Indigestions, that wont give

y to the Shop Medicines, those

t ride most are healthiest. 3

lking; better adapted for the pre-

vat: than the recovery of health as

k persons can't use it, much less

they use

ing: Riding in a Carriage is of the

e nature with Horsback. Sailin

romote agreeable Alacrity. We shou

ays recommend Increase where

Mind is relaxed. therefore Hunti
& the Rural diversions the best. he w
want the Spt of a Man that wont b
diverted. Hunting. excellent Hunte
never die if they did not drink har
Foot ball, Cricket, are of the same Na
at Bath all the Manner of spendin
the time) familiar, forgott. tours upo
the Parade Horses Carriages. Dancin
are Excellent for Diseases from relaxa
Have spoke of Diet & Exercise now
what do the Shops afford "the Bo
& Strength.n & x Astring Med: are tho
that Contract these Parts to wch Applie
Allum upon the Mouth draws into
closer Contact: the fib: the Acid of
the Med: are mentioned above. Of the Mod
Operand: of Iron or Steel. much the Sam
only one harder from more of the Phlogis
ted to it. the most Powerfull Astring
shops: bring a Girl Green Sicknes
orph: Sympt: Cured only by Steel from its
ilities all the Preparat: have it. [illegible]
[illegible]

Lect: 2d Octob: 2d

We began yesterday wth Principles
Introlab: as apart: to living Subjects as
attraction & gravity. Apparent in diff:
Parts, Spun, Muscles: Recapit: Circu-
lat: from the right Sinus Venes.
Capillary Arteries do not always enter
into Capillary Veins, but by a large
trunk, as appears from Inject:
Contract: of Heart — quicker & Stronger
by increased [quantity] of blood — fainting
from a want of blood from V.I. &c.
excite the Contract of the Vessels by
Volatiles, Cold water. dobery Elast:
propels the blood. Atmosphere in
the Veins — Effects of the Atmo
of the Heart & Art: Various —
Changes the Chyle into blood. by-
act: attrit: the Coagument: increas
Viscid. Lentor. In weak Constitution
ant be wrot up. thin watery —

The veins in Strong rob: density
black when drawn, buffy as in a
horse who uses much exercise
labourers. Weakly, depraved
watery, not prepared, act Vital
heat nourishment, P. weak &
feeble. Viscid
Concretions. Aliments
Chyle, Oil, Milk. Blood.
red tremulus Coag: Separates
into Crass: & Serum.— Coag: by
A.S. Putrefac: dispelves. cant be
long: & Coag: with A.S. cant be
dissolved. hence in these Cases cant
be cured only Palliated. Women too
get to drink. bad, many of them
complets from it. Case — Generally
Drunkers have affected livers. Dropsy
from A.S. incurable the he may live
for some Months. Blood Chyle
Chem: Water, Oil, Salt, Air, but has

do not exist in these forms, we only learn, that the blood is an Animal Substance as all Parts of Animal yield the same, Sp^{t} of blood, same wth Sal C.C. Bone yields the same Dust Carts, Oil for Coaches, Cart Loads by Shore ditch Church, Chymist use them, as good. lowered the Price 10^{s} — 4^{d}½, trading Chymist 2^{s} 10 Chym: therefore only shows us that Blood Anim: Sub: try what a few obvious Exper: will discov; Aliments. Phlegm: Oil, Salts, Earth Cream, Curd, ~~Serum~~ Whey. Salt. the Same analogous. in the blood. Serum, cons^{t} Salt, water, Coagulab: Lymph the same as the White of Egg — may be Coag: till like horn or Amber. Crassam: Curd in Milk contains the Cream, wch mellows the Chees _ Blood Crass: contains the

red oily Particles, take a stick
& you may separate the Crass:
leaving the Serum & red part:
Wash the Crass: white. as
let a person bled into warm
water, & you may scum off a flake
Gaubius says that the red burn=
ing Part: flame like oil of Cream
Tartar. But not to be observed in
the first days of a Pleurisy.
Buff. is the safe with the Cog:
not a certain rule of bleeding.
Putrefyed objects, thrust them
out of his Coast: last drop
be Sizy. It argues a too incrast
a heat & act: of Vessels in the V. I.
tis true Effects but not to be
feared too far. Those in highest
health the most Buff Coated
even. Horn Inoculated. Cow

do all you can require. Graſs
not so good. Sweat, Pant. decay,
blood better Sizy than diſsolved,
in gen: practic: in diseas: an Arg.t
of too much heat. receipt: of severa
Parts. The Proport: of each not
easily determined. but yet we abſo
neceſs to Health, diff: in diff: Persons
fluids more than than Solids
Circulat: in a Middle sized Man
28lb, 16 Arteries Vein 9: +

Lect: 3 Oct: 3d

From the facts already l.d down we m
proceed to treat of the Eff: of Loſs of B:
we remarked the Circul: Compos.t
Dimc. their ~~remember:~~ the
The Loſs 2 fold solids promotes relax: fluids
atten only. promotes in Plethora
the action of the Solids. oppressed
Pulse Hunter. V.S. it raises. it

es in Diseases from Plethora: useful
in Bow over distended loses its force
when blood drawn off to the least,
cavities, Abscess, Stupor, ruptures
of Vessels: relieved by V.S. in Plethora there-
fore promotes the circulat: in all
other cases weakens it. blood
is the cause of the contract of the
heart, therefore if too little weakens.
Tense Pulse, too much excited
requires it. Galen tells of a Youth
ore Jugulated fib: we call therefore
at any time lower Vis Vitæ
Sydenham a young fellow oppressed
Pulse. after V.S. violent fever w.
cured by 2 or 3 bleedings hence
when useful, whether under par full, as in
Nervous or Putrid Fevers: never con-
traise it but when above par always
useful. Inf: always as full N.S.
raised. strong robust. Weakly

Effect: on the fluids. always thins =
Dropsy brot on by it. Evident: for
the Crass: is the densest Part & is
the effect of Strong Solids. the most
Elab: therefore not easily repaird,
Vess
fill'd wth thin Juices. Soon supplied
with lb i of broth, but does not do
hence the Eff: of V.S. more permanent
than other evac: there is always a
Proport: between the Crass: & the
Strength & vice versa _

Little to be judged from the appear:
of the blood. kept in heat all almost
Serum, in frost all Crass: in patients
V.S
ceteris paribus equal. never usefull
but when too much Crass: always
hurtfull when too much serum - If
there are signs of Stagnat: from Heat
by Stupor &c from drinking Wine:
if tense throb: Pulse signs of a too

much ~~[illegible]~~ Impetu: Cure, if too Dense
fluids — If a weakened Circulat
bring? a Chloros. by V.S. bring on
a Dropsy: if in a Dropsy we in-
crease the Collect: of Water. never
usefull where we give Confect: Card:
water on fire to make it burn.
in Nerv: fev: death & distract:
Much more usefull in the Country
than in London. His father. St Thos
Hospital. I Never bleed or d without fear
& trembling. With more freedom I give
Arsenic. Nine fevers in the Country
but what require V.S. few in L:
will bear it. a Puny tender delicate
Patient always hurt. Strong robust
Chlorot: Patients never have Inflamm
fever a Strong robust Man never
a Nervous fever. Puls will in-
dicate —

What part bleed from: the Antient
believe in revulsion drawing from
Parte to a part. as in Obstructed:
from the head vessels: Parte to
wasted Limbs. with these 30 years
strong advocates for this. but the Ge-
nerality now think it indifferent:
Yet in Particular Disease I have some
who are very particular: A trick.
in the Nose Measles: Apoplexy: from
the Jugulars rather than the Arm: but
where there is a real occasion, where
the Artery is too full, or Erector
from any Part unfull. if not hurtful
the Part of res: & deriv: a more
John. no solid argument: easily
overturn'd, Chuse a Vein that will
bleed freely, Sometime 3xy will do
more then 16 repeated, not advisable

the quantity in gen: diff: accord
age Const: Country 18.℥℥. in
town not above 10 or 12 ℥. the
Effects of V.S. merely Mechanical
can always judge when it will
be usefull

Lecture 4th Oct: 6th

In last showed ye Eff: of Evac: of B: was 2 fold on Vol: 2 fold: fluids
thin: in Plethora: their Act: Promoted. Where
the Impet: is too much exert: V.S. is of use because
Dense Crass: taken away. No use in
Putrid the cases where Of real use
in Plethora & Inflam: vide text
~~Of Plethora~~
Next: Inflam: & Inflam Dis: in Gen:
of great Imp: if we know its nature we
know: all &c. & we know the Cure
of all to which the Synth: affixed
the Name Itis Phrenitis & c
Angina Inflammat: of Intest.

we shall therefore lay down the
Diagnos: wch Disting: Inflamat in gen: its Causes
Cure Vide tenth Vol: 8

In Inf. Characters: every Disease
should Pathogn: Sympt. wch Charact
Pain does not always Inf Brain & Lungs
without. therefore this is not absolute.
In Inf: of the Br: Lungs Mad but not
sensible of it. in Lungs never
unless the Pleura is affected
In all other Except in these Org: its Characterist
but not always. severe Pains in
the Side is sometimes from Spasm
as Violent. Peripn: Pleuri. &c from Cholics from Inf:
that were Period & Spasm: the best 2 Cures with the Sinapi
with Clysters & Opium or Bals: Peru
Pain in Inf: Continu intermittin
in Spasm by intervals. it is sometime eased; more
violent in Inf: but with the fever

& I
never met wt Intern: Inf: without
it ~~without~~ fever: esper: of the Pain was of the throat
kind: if Externt it: without fev:
must not treat wt Antiphl: &c.
if no fever depend upon it not Inf:
Causes of Inf: remarked Pulse
~~stong~~ quicker & tent: Infl: Lungs
Toft: not universal Cause & have
its always quicker. "This can
only" tent on "and the like".
from a thorn or Splinter in the
finger have seen it extend to the
Shoulder. "But as Inflam: &c
"febrile Complaints": Boerhave
the first who gave account of
the Causes of Inf: knew nothing
of Irritab: [illegible]. Obstruct
not sufficient. Cold is the
only universal Cause. all com=
plain that they have been Exposed got Cold

only one Cause, & is Colds—
Sometimes from leaving off a Garmen
Cold Liquors, hot rooms, Cold Air.
Dr Ratcliff: Patnt Cold wt the
Devil would you have. Now of
the Theory how it acts. I have read
all, none adequate. some Cold contracts
the Vessels, retains the Air: Perspi
rat: some objects agains the Acrim
& conseq: this Theory. the Impet
of the fluids drove inwards. Subject
to object: none satisfact: we know
the fact. Pringle in the Spring
if took the field, or staid out
in Autumn. All Intern: Inf: ac-
knowledge but one Cause viz obst
~~[illegible]~~ Perspirat:
Proximat: Cause Theory comp:
of White & Haller: Irritat: product

I obstruct ab errore Loci
His Boerhaves doctrine ab Errore
Loci. Physiology Says
Cant see how the obst: of Capill:
can produce: such Congestions
Hollers: Effusion of blood into
the Cellular Membrain Hollar
says the Cause not known
White Inflat: ch occasions
Obstruct: Vibrat: ch causes
a greater circulat: thro them.
Irritat: Causes necessary but
Occasions an Effusion.
Doctrine confounded of Inflam: tumor: does not long
continue. Suppurat: Robert:
Suppurat: Gangrene: &c &c
all traversable by them, Schurrus
not the Consequence of Inflam.

Should try to bring on one of these 3. Resolut: best. Suppurat internal Vomica Pulm: bad: Consumpt Conseq: Liver, Purulent Ascites, Hectical Sympt: Gang: the worst. Resolut: best. a Critical Abscess should not be repelled. Suppos: Pleurisy cured by an Abscess in the Leg Aph: a Pleurit: Phrenitis &c should not be repelled. In Inflam should always attempt Resolut "to Procure" or "at most 3 times". By bleed: we can lower the Vis Vitæ as much as we please. Remove the Cause. Obst: Perspirat: should not give Sudorif: till the mot: Sang: is reduced. Secret: do not go on. Repet V.S. till moderate

then use some Antimon:
Jas: Powder: & Stool, sweat &
does not heat: cool: Emet: Tart;
Ipecac: Vin: excellent: by ++
in barley water or Wine Whey
Wards White Hellib: all the
Emet in small doses Sudorif
Except Merc: & Vitriol: per-
haps by their gentle Stimulus
Jas Powder, excellent
Antient: knew nothing of it:
one would suppose, in Angin:
& Pleurisy distinct: facts prove
the contrary generally Laxative &
Relaxant: Relieve the Pain
may be given in Inflammat of
the Intest &c + all the Solut: of Iron
in Water or any other Tinct Stypt: Helvet
Tinct Mart in Spt Salis. Tinctura Stypt
Sal Chalyb: Vitriol Martis. Strengthen the
Stomach Intest. Chyle better Prepared & Absorbed
Effects continued: better blood. beyond their Pass:

Lecture 6th

Last Lt. spoke of the Diagnos Causes & of Inflam: Event
Dr remarked that all intern: Inflamm
had fever: not topical: as in Ophthalmia
but all ending in Itis: Brain Lungs
not Pain, but th in Fever. Cause is universally irritat:
External Inf: has Wounds Bruises &c for its Cause & Intern
has only Could. wh somehow or other Causing
Irritat: this Inf. will soon and in Suppurat: Gang: or Ferment:
will come on. Resolut: if Abrupt
takes place otherwise Extravasat
& Suppurat. Gangrene when the
Parts are peculiarly prone to Putref:
To procure Resolut: Vide text.
One of the greatest improv: in fev: Antimon
Prep: indebted to James for its
general use there is in 1703
a Pulv: Febrif: in a German Pharm
but not much known till Jas
Jas: uses his in all Inf: affect

Vide
Baglivi, first bleed & then Sweat.
by bleeding
we often abate Pain, when the blood
is drove wth great force, to any Part or bleed
& then give Antimon: sometime
it is necessary to blead
2 or 3 times first: the Powders
prescribed in text as good as
Jas Powder. Tart Emet I well
backe wth Calx: Antimon against
Jas Powder, the Common: Subst: now in
Extemp: Prescript: of Tart: Emet: wth Calx Antim
Pulv: effect
℞ P. Cal. Gr x0: Tart: Emet Grs i so that
you may divid & Give an Eighth
Sal Alcali more apt to disunite
the Acid of T. Emet: than C. Ant:
Dose of Grs ij, to puke is ~~to~~ best.
a Grs iss to a Strong Man: Must
give something between the Doses
Saline Mixt: best, all neutrals are Cooling
Dilute Purge, Diuret: sudorif:
commonly give ʒi Nitre when we

want to Cool, if sweat 30 Gt. Vin
Ipecac: "If the Pulse Cost" Salt
of C.C. takes off the Grip: quality
of Scamm: & is the only corrector
"When the Pulse" Sal C.C. will
seem improp: in interm: Inf: but it
is not attended with the heating
qual: of other Stim: it never fills the Pulse
tho' it quickens it. it is the best
resolvent in Interm: Inf: thus Vol:
Lin: is good 2 for Bile: Pringle in Augm vide
Sal. C.C. & the got from Young
of Ed: Physic: often give the
Sal C.C. very freely but not till
the 2 or 3 day after bleeding
Sometimes necessary to raise
the P. in Interm: inf: but not
till the latter end of i fever Oxen

the
N fev: we some times bleed
too much in Inf: then necess:
nature must be assisted to Concoct
the Disease. I have a Case where
the Patnt has been bled Zxij times
tho his Case not very Inflamm:
& I can't give him strength, it is
therefore sometimes necessary
to raise the Patnt & Cord, for nothing prevents
a Concoct so much as too much
lowering. therefore raise, &
support the Vis Vitæ
another remedy in Inflam: Opiates
some say it is Poison, but Exper
~~ob~~ teaches better. it will some
times save 2 or 3 bleedings for
a Spasmod: Pain comes on some times after
tho wit you would be apt to bleed but &
1 or 2 bleeding only relieved
by Opiates when the fever has
abated often the Patnt still complains of

Pain give Op: the only danger is
Suppurat: wh is suffic: prevented
by the bleeding "Topical App":
When we come to Top: Inf: shall
be short, because have been full
in Inf: in gen: Let us run over the
& we shall find the lung nearly the same
Hss. Phrenitis, diff: from Phrensy
Ant: Opii:
by fever: bleed: blister, then Opiates
vid: Pring
Inf: Angin: I Peripneum: bleed
1 or 2oc Ant: Sal: C.C or li Card:
Blister, Opiates. Paraphrenitis, He-
patitis, the same. Paraphrenitis
Inf: of Kidnies, Intestines. as
a discharge from the Partis desirable
procure
procure stools. Lungs, Expectorat
In
General: Inflam: the Cure fever, the same
Have now Explained the mod
operand: of V.I. we proceed now
to the Opposite Effects of Stimuli.

have endeav: ~~to~~ Shew how
Hitherto to allay the Circulat:
were designed to promote is
the Stimulat: Med: & a know:
them is
ledge of it as necessary. Previously
a Theory of the Brains & Nerves
would seem necessary to be premised
so much about them
but we know not &c — better
to proceed on facts. With Dr
Whyte there is a Power in the
Brain & Spinal Marrow & Nerves
of contracting the Part these pass to
when stimulat: Cut a Nerve &
vide Act: 8 Vol: 2 Med: Ess:
there is a diff: between the irrit: contract & those from the Will
Either Stim: Stimi: Muscles Contract:
bellies do not swell as when
from the Will & the Will can
always increase the Contract:
must contract
The Muscles of a frog: Touched
is taken we shall
Stone: after Vitriol: &c illustrate
them afterwards. all Muscles
contract from Stimulus and the
the stimulus make it
will cannot prevent it, & greater

by Stim: by the Will, & by Stim: against the Wil
3 Cases. Greatly increased by
an irritat^n Cause, the Effects of
Stim: Med: accounted for from this.
that wch Stim one Part wont.
another. Cicut: Aquat: Rad: Cat:
aplasm applied to Inflam: part
no Effects, but Violent when taken int to the
Stom: diff: Med: therefore occasion
diff: Excretions
Muscular Part bro^t into Action
by the Will, by Stim against the
Will from Stim: hence account
for Convuls: in children, Cutting, Small
Pox: Stim: dilatat^n of the Heart & Arteries
arising from Inf: Fever: Hectical proceeds from Pus.
Bell: & occasioning a Purging, Fitts of the Stone
from Irrit: in the bladder. all
from Irritat^n all Medecine operate
by Irritat^n

Lect 6

Yestard: the nature of of Stim: & Stimul Med today we shall speak of the Mod: Operandi. We said that the Solids are subject: to Stim: & from this Principle shall Acc for disease & ope: of Med:

In speaking of Stimulants we shall first treat of Stern: 2 Sialagogues 3 Expect Emet: Cath Diuret & Sudorif:

Some ~~Specif: Med:~~ Stimuli are calculated to act on one Part not on another hence: Specif: Stim: we remark that Fæces, Stom: Urine, Clyster. diff: Org: diff: affect: by the same hence Speci: Med: Sternutat: irritat the Schneid: Memb: cause: a disch sometimes discharg of advant as in diseased Eyes! the Shock in Abscesses. We may go farther for the Med: is sometimes taken into the blood Medicated Snuff, cured Lepracy Pox &c Turpeth Mineral a very powerfull Sternutat;

& tis probab: that it makes Part of this Sneef
& I have been calld to Patients
Salivat: by this Sneeff: It will
therefore be taken into the blood.
Of Salivat: Is An Increased Secret:
Pepper, & Mustard; occasion an
increast Secret: but this is not lasting
Mercury procure it 1℔ 2 or 3 in
a day & it will last 3 Month
of the Modus Operandi that it acted
Boerhaave supposed by its
gravity. but I don't think so
for it does not act as Mercury, must
change its Metall: Appearance
a Pound may be taken without
Salivat, deprive it of its Metall: form by any means & it Salivates
Merc: may be united with Ol: Vit:
a corros: preparat: wash it with
water Precipitates turpeth Min
With Nitre a white Precip:
precip: it with Spt of Win: & it becomes red Precip

Wise

Crude: the progress it Merc: Corrallin:
With Marine Acid: is Corros
Sublimat: which is much used
Best ~~prepared~~ without a most Acid
Turpeth Mineral is but a degree from
Poisons, hurts the Constitut & so
of the rest. Merc:
Calcinat: best: Keysers Pill
is the gray Powder procured by
agitation at the fan of a Wind
Mill by Boerhaave. but for
both these are Mercury deprived
of its Metall: Appearance by
Turpentine, honey or Bals Peru:
Preparation with the least Acid are Safest
tho not the most Powerfull.
Turpeth is the most violent will
succeed when no other will
Lady going to be Married
and afore day
Sublimat would not cure her Legs
Turpeth did.

Lady at Chelsea had taken
all but Purgett would not do
without it. Venereal case, would
not do with all the Preparat
till Purgett: I used to think
all the Preparat: the same in
effects: Corrosive: but but I
found it would not D^
It is by its Action: when deprived
of Metall. Appears: all act:
Purges: Vomits Sweats, Urine &c
Object: to its weight can be
got over: very Disputable
Disputed in this by Heat &
Proof of its Parts: Union with
Turpentine another found with
a Pound of Lard, every grain as
equal Proport: of Lard Mercury.

Dissolve Sublimat: Gr. j, Aq. ℥ lbj
join this to a Hogshead of Water is equally diffused
all will have an equal Part
whence then is it its gravity. It does not
subside in a Month, ~~It~~ therefore it is as it is
so divisible into suff. minute Parts, does not act by
its Gravity ~~it~~ but Stimulus.
Coppery Taste before Salivation
Gripes ~~are~~ Proofs of ~~its~~ Stimulus.
Sweats if ~~its~~ Patient is kept Warm, passes off by Urine
if not. Salivates if by neither & is given in great
enough q.ty.   Of Emetics
these ~~are~~ those w.ch irritate the Stom.
into contract. So as to discharge its contents
~~most~~ some Effect: cleanses the Stom.
by ~~its~~ their Shock, sometimes by the same Means drives Bile
into the Stomach. In Jaundice
a Vomit sometimes removes the Obstruct. & in other
Abdom: Obstruct. it does the same hence given

in Dropsies Sydenham Vide
Catharticks by irritat: occasion an increased
flow of humours into the Intest: tubes
& Quickens the Peristalt: Motion.
Gripes all from irritat: We
Cant apply the other Med: to the
Seat of Diet: Diuret: e.g. of all
the Diuret: Med: in the M.M. writers not one to
be depended on In short I have doubted whether there is any such thing.
Stainton in behalf the Gum Mater
would not make him Diss: tried
Colch: Althaeis, & Juniper of Terebinth: Sal: Diuret: Ol
& Ʒotz dil Decoct: Scillit. cant apply it
to the Kidnies. must be taken
into the Stomach where it is weakened.
Sometimes all these wont ineffectuate Ol:s Cinnam: Genista
Juniper & Terebinth Ol: 2 the best
but none to be depended on, all that

have any Effect: are of the Stim:
awfull
kind: Squills: sometimes often
have often protested against the use of it
spoils the Stomach — By Stim
& heating the Hardness all act if they
have any Effect till
Sudorific they stim: all Emet: in
small doses Sud: Ipecac: Vinat
we may too
by relaxing the Skin, & by Evac
~~ea~~ procure Sweat, but all the Med
Sud: are of the Stim: kind: Vin:
Ant: &c they are all too Expect
from Stim: & so are all the
Evacuat: kind: some Stimulate
one Organ some another:
aromat
Cordials are Stim: all Except
Spt Liquors, tho these have a
Spt that heat the Mouth the
Lavque
Essent: Oils, Snakeroot Contrayerva
all a biting quallity: Can act
for their action in raising the

spirits by dowsing on the blood
Saffron & Castor on this act
as it has no bitter quality is
most Cordial. A Pupil took 3ij
without any Effect:
Dr Oldfield or Dr Wandsworth
Guys Hospt: Man with a tumor
on his thigh. from Saffron Walden
Had the story from Dr Dod Wilmot
Some would begin with 5 grs and 10
gave 3ij every 6 hours took 3ij
of the last in 2 days.
Castor as it has no stim: bitter
quality is not cordial, but may be
of use in Spasms. we Should at first
join Cordials with them. the
full steps is not laid on them now
30 years ago: Mod: Opin: them
Can have appear

Lecture 9th

Yesterday Stim: Mod: Ope: & Effi:
ion of Convuls: & Spasms;
remarked that every Musc: capab:
of a 2 fold contract: from the will
& Stim: By irritat: is brot on Con-
vuls: the same as Contract:
we always mean by a Convuls:
disease a Spasmod: sometimes it
is general sometimes of a Partic:
Part: only as Spasm: Cynicus &
Risus Sardon: — Shall now acct
for the Causes "This can only
system" remarking the Brain the origin
of Nerv: Power: if under irritat:
there will occasion an irreg
influx. A favourite Greyhound
Sinuses formed in the Brain
from fracture vide Turner

A febrile Cause deposited on the
Brain occasions Spasms, Convuls:
twitchings. Boy on windmill hill
Moore fields in a Putrid Fever had them;
Passions of the Mind affecting the Brain, occasion
them very: delirium: Irritati: in
any Part: as worms, teething;
Adults have General: Convulsi: from
a Partic Part affected: as Jaw Lock from
a Prick in the finger &c — A
Partial Convulsi: sometimes only. Inanition
in Persons bleeding to death, occasion Spasms weak-
ness & Lenity & irritabil: the same
hence Children most Subject, which is
not the Case with Robust Men:
Spasmod: Pain or not so when the
Cause is in the Brain no Pain is felt
Hysteric Women feel no Pain but are weary
from the Violent Acti: of the Muscles

Convulsed in Small Pox
Children feel no Pain. but when
the irritat: affects a Partic: Nerve
as when there is a Pain in
the Side, Intestines &c. but the
Brain is the fount: of Sensat:
of belonging when Seated
has no sense of Itself. But in
whether
a Partic Nerve, Nervous is not
there is
Pain. We have laid down
rules ~~in Inflamm~~ Pain
how to disting: A Spasmod
-ic fits. Sitting by a Patnt
without asking a Question
you may determine by its
of consequence the
interm: Cure diff: instead
of V.S. a Turk b. Clyster with the
is to be used
Opening the Cure, this is often
according to the form
difficult often incurable.
Worms are the Cause Vermifug:
of Acid. testacea. & then
cant get at the Part, then ~~is~~
the best remedy is ~~to~~ use

Opiates. it stupefies the Nerves
nowadays we would not do without Op: in Practice its effect is the
same for the time as if the Pain
was taken away: In Vomiting, Purging
Cough &c It takes off the Irritat:
oftentimes we Must give it in large & repeated
Doses. but let it be in a violent
Disease ~~before~~ when we venture to do it. Sometimes it is best given Clys-
ters. Violent Pain of the Bowels
in a Lady near Bloomsbury
Dr Battie, Opiate Clysters lost
effect: took Gr viij by the Mouth
& Clysters. Emprosthotonos
forward flexors, Opisthot: Extens:
backwards Tetanus when
flex: & Extens: Opium the only
Remedy here & in the —

Lock Jaw: Tetanos may have
been got in Gibraltar & West
Indies &c. &c: East Indies.
Undertakes to cure. Could
not tell; revealed, this stopt &c
they always die of the Disease
affecting the Lungs & Respiratt.
Muscles affected: often comes
on suddenly the Last was
as well 1 minute before he
died as he had been since
taken. Died the 3d day as most
do. — another case died the 3d
day. Used Emplast. Picis from
the Nape of the Neck to the
Extract
This disease is
usually occasioned
by getting Cold Suddenly after

ing heated with Exercise, the
Patients pronounced incurable
ase in Mid: Hosp: & as I had found it so gave Op:
gr i. Ipec: j. every hour took
3 in 24 hours: as she was bound by it in the belly ordered a
Clyster. got better & at last
reduced to gr j at bed time
cured. at Barthol: Hosp: they give
ʒj Opi: at a Dose & cured their
Patients. may then be given in
very large Doses. but Cases seldom
occur that require it. Hysteri:
it may be cured by it. Where it is used it is
Use rarely affects the head
as in the Man last Midd: Hosp:
he slept but 3 hours in 24!
Blister & Sinap: &c

Lecture 8th

Have spoke of V.S. & the Mod: Operand
of Stim: Med: we shall treat Now of some
of the Diseases of the most simp
first: most simp: are 2 fold
those from relaxat: & those from rigidity; & from the knowing these
I shall be able to understand Chlorosis
Dropsy &c & also the nat: Cause &
Cure of almost every Chronic
Disease, just the knowledge of these as that
Disease, as Diff: of all diff: is
"the Causes of Relax: 5y tone"
there are not many Causes of
relax but may be included
under these 5 of the D.s. no one can
be supported without proper
nutritt. Starve a Horse & it wont
be fit for labour if a Child in infancy
a general relax: this will cau

not necess: that the quantity
ut quality of food is diminished.
Scorbut: Diseases at Sea from
want of Nutrit: diet. An inertia
laxity of the Digest: Power among
2d Musc: Mot: absolute necess:
strength of body: ceteris paribus
e more Exercise the stronger if
ot overdone; but should use much
utrit: diet, & if there are persons
e strongest possible training
ose is giving him the most strength you can
ng give him
hysic to get the Stom into a
ropr: Condit: then give Nutrit
ood. Sweats, Galloping, are
Harrison the Bruiser walked
o Miles a day. the Hunter. Gallop
orn a food. &c

Country People stronger than
the Sedantary Studious Man
poor Puny. Let a twin brother
bred a Student the other a Country
Labourer. 1st a little Hercules
the other 2d low Spirits, Rumbling
wind in the bowels. Post Chaise
~~Horses~~ Hackney Horses, Gent
Coach horses. People of Condt
all Hyppt Nervous. Ladies
Visit. In Queen Eliz. days dine
on Cold haunch of roast beef
ride on Horse back to St Pauls
2 Sorts of People in a Country
Village. Lace Makers. Sit on
~~their~~ Arses at their Pillows
3dly Bleedings see one
out a Salivat. Diarrhea,
Diabetes —

ly No matter what engaged
hout lust Upon applicat to any
ing: Strange the connex: between
Mind & body. Pain takes off the
Attent: & vice versa. Distress
of Mind, traced, Man & Defect
in Circumstances. Fretting will
always bring on Nervous diseases
Close Study of any kind. Mathe
matics —
ly Sprained Ankles weak.
hin of the discoloration of a
Woman that had a Child —
The Sympt:
Acid in Stom: from Indigest:
n a Girl in the Green Sickness
Eat Chalk, Lime &c
from a Debilitated — and
the like

You may tell a relaxed Person
by their look. Bloated Pale
& Wan. not florid, bloom.
can tell from the look what
are the complaints, tired,
low Spts Nervous Head Achs
a Numbed Pain as if the Scalp
bound over the Cranium with
Cords, a trick in Physic
Cure Adage Remove the
Cause & the Effect will Cease
Cure divided into heads
according to the Causes —
"A Proper diet" & where there
have been great Evacuations
Flooding, Menses, Diarrhae
Fluor — diet proper is the Cure
Shall Examine first

Milk is Chyle prepared in the
ody of Another Animal easily
repared. the food of all young
Vivip: Animals. Exceeding
ourishing. Every Milk not
qual. Milk is divided into
ream Curd & Whey. the Curd
t is that lies heavy, Rum ne-
ſsary to be added to make
t paſs off lightly from weak
tomachs, See Hoffmans Eſsay
n Milk. Cows & Goats
Milk diffi: proporti: of the
y & of Saline Matter
w Practitioners know why
y order Aſses Milk rather
an Cows Milk. Capivaccius
lls several Stories of the

good Effects of Milk. A
young fellow Sucks the Milk
of two Young Women; Dawes.
Eggs very nutrit: Chick
nourished from the size of
the Magot. Yolk Sucked
into the Anus. the proper
nutrit: of the young. a wise
provis: of Nature. in Case
of the Youngs being hatched
in bad weather. The White
should never be boiled. is
very indigishble with Salt
very nutrit: with a Stronger
Stomach the Yolk is very
nutritious. A Boaster
of Mr Blickdel, delivering
from mere weakness.–

Eggs & Milk extreamly nutrit:
ook 2 Quarts & 8 Eggs in 24
hours —
Bread — very digestible —
Beef tea contains only the
nutrit: Parts. long boiling
ntracts the Heavy Glue —
Venison tea the best. Game
will Pass of: an Alderman will
eat 6lb of Venison & it will
pass off tho he is full to the
roat —

Lecture 9th

Nutrit: as above: Exercise — the more
the stronger if not are fatiegued. Fencers
om. Dancers. On the Stage if 1 Month out
Exercise cant leap so high, very if are
: the whole System of fibres strengthened
t. by Exerc: the blood driven with
re force to the heart, the heart sends
with more force into the Arteries

the fluids ~~are~~ to the Solids, it is
more strongly applied the best remedy
in Chloros &c. Dr Oldfield to his
Friend recommended a friend a horse &
a bottle & wickets, Nerv: Compts
shall Examine the Eff: of diff: kinds
of Exercise. friction, riding running
or walking. friction may be used
by the Weakest Patients. the blood is
sent by it to the heart on acct of the Valves
you
may even excite a fever of use in
Drop: Compts for as the Swelld leggs
of Chlorot Girls. Dr Oldfield cured
the Hydrops Ascites by frictions
with Oil. wch only prevents Chaffing
& Dr Macaulay refined
Promotes Absorption. In Chron:
Rheumat: rubbing wth the flesh
Brush of use. Where Patients cant
Exercise out of Doors sometimes the
the Chamber horse may be used
Addison using the Dumb bell
fought a Mans Shadow & bracing

Lecture 2:

We began yesterday with laying down some Principles which were necessary to be understood before we could proceed any length in the Prosecution of our Subject. Accordingly we began with Irritability, which is the most material, since all the actions functions of the Animal Oeconomy depend upon it, and we shewed that it is as Essential to the living Solids, as Attraction or Gravitation is to other Bodies in general, nay that it is the very same thing as Life itself, but this Irritability, may be is different, as it may be productive of different Effects in different Parts of the Body. Thus in the Skin it may give occasion to the Skins being disagreeably affected but in the Muscles it may cause

them to be drawn in to violent Con-
tractions.

The blood we observed in the Course
of its Circulation proceeded from the
right Sinus Venosus into the right
Auricle, & from thence into the right
Ventricle of the Heart. hence it was thrown
into the Pulmonary Artery, whence it &
was again returned by the Pulmonary Vein
to the left Auricle & Ventricle, where
it was thrown into the Aorta, & so passed
on thro the whole Arterious System till
it was again returned to the Heart by the Veins, and
thus in perpetual round it traverses
the body. I told you likewise that the
Arteries did not always terminate by
Capilaries, in Capilary Veins, but that
they often Communicated by large
Trunks, as I have frequently seen
proved by Injection.

Since the Contraction of the heart depends
upon the Stimulus of the blood, it like-

appeard very Plain to you that the greater quantity of blood was sent to=
wards the Heart the Stronger & more fre=
quent would be its Contractions. this I
proved to you from the Opposite Effect,
for you may bleed the Strongest and
most Plethoric Man till he faint
which is no more than a Stagnation of the Circulation of the blood
the Motion of the heart for want of a
sufficient Supply of blood to Stimulate
it into Contraction, for if you apply
Volatiles to the Nostrils of a Man,
or if you throw Cold Water on him,
you occasion a Contraction of the Vessels
which quickens the motion of blood
toward the heart, & thus you imme=
diately recover him out of a fainting
fit. I proved to you that the Circulation
of the blood thro the Arteries, Expanded
greatly, & was promoted very much, by

the Elasticity of their Coats, but that
this had no share at all in its motion
thro the Veins, where it almost wholly
depended on the Pressure of the Cir-
cumambient Atmosphere.

We proceed now to speak of the
Effects which are produced on the
circulating fluid, by the Action of
the Heart and Arteries.

And there we find to be exceedingly
various, for the blood of different Persons
is as different from that of another
as they vary in the general tenor of
their Constitutions. We shall find the
blood of a Chlorotic Girl Pale and
Watery, while that of a Strong robust
Person is red, florid, dense and almost
entirely consisting of Crassamentum.
This difference is entirely owing to
the different Strength & Rigidity of the Solids,
the fluids for it is by the Action of the

Heart & Arteries upon the fluids
that the Chyle is changed into red
blood by the Animal Oeconom. and
the greater the Attrition which takes
place, the greater will be the quan-
tity of Red blood & of Inflammatory
for these are the most Elaborate
Parts of the Animal fluids. hence
in Strong Robust healthy & Laborious
Persons, the Blood is often found so exceed-
ingly dense & Viscid & Lentor that
it can scarcely Circulate with freedom
thro the Veins, while on the other
hand in weakly Constitutions it cant
be wrought up to a sufficient de-
gree & therefore it remains thin and
Watery. In the one Case the blood
has acquired such a degree of Density
that it appears black, as very dark be-
lood when drawn, & after standing some

time it is covered with a coat of
buff that is as tough as Leather.
Take an able horse that uses much
Exercise & bleed him at any time
& you may always be sure to find
this appearance, & just the same is
the Case of Labourers. But in weak-
ly Constitutions, the blood always
appears dissolved & Watery, it is
not sufficiently prepared, there is
not attrition enought to excite a
Vital heat, & the fluids are not
calculated to afford proper nour-
rishment. the Pulse appears weak
& feeble, and the countenance was sickly
In the case of
mention of a Chlorotic Girl from a
whom blood had been imprudently
drawn, which had undergone
inconsiderable a change that it
still remained white like Chyle &
Milkey —

There is likewise a Glutinocity, or Viscitous Lentor, which sometimes takes place in the fluids, and is the consequence of weakend & relaxed Solids, and a Languid Circulation. It is attended with pretty nearly the same Symptoms, & disposes the fluids to form Obstructions, & to turn into Vicid Concretions.

We shall now proceed to trace out fluids thro the different Stages, from the time they are Aliments till they are formed into red blood, and here I believe we shall find a pretty strict analogy. for our Aliments we know chiefly consist of Oily Mucilaginous, Phlegmatic or Watery, Saline & Earthy Parts, and all the same Principles are found to exist in the Chyle in the Milk & in the Human blood.

Oil, Salt, Phlegm, & Earth are the
Principles into which the Animal
fluids are resolved by Chymestry.
however we learn very little by this
that can be of use to us in the Cure of
disorders, since these are not the forms
in which they naturally exist in the human
body. It only teaches us that they
are Animal Substance, for all the
Parts of Animals yield just the same
Principles. The Spirit of blood which
used to be so much esteem'd & procured
at so great a Price formerly, is now
found to be exactly the same with
the Salt of Hartshorn, and this is
noways different from that which
is Distilled from the other Parts of
Animals. Bone yields the same in
very great abundance, & it is owing to
the quantity that is distilled

from bone which has so much re-
duced the Price of it, for when it was
distilled from Bucks horn alone
it could not be bought for less than
ten Shillings a Pound, whereas now
it can be made for 4 ½ a Pound
& is sold by the trading Apyrest
for 2 s. 6 d. I had frequently observed,
the women with their Dust Carts always
taking great care to collect the
Bones & put them in a Basket,
& at last was curious enough to
enquire what use they made of them
I was told that they carried them on
home & boiled them for the Oil
which they sold & got a good deal
of Money for, for greesing of Carts
& Coaches. They make no further use
of them, but carry them away and

pile them up somewhere out of
the City, accordingly I have seen hun-
dreds of Cartloads lying as you go
out at Shoreditch Church in your way to
Hackney — Many of these are Carried
away in Carts for Manure by the Far-
mers, but a much greater Share is
used by the Augmists for distilling
the Spt of Hartshorn. Augmistry
therefore teaches us no more with
regard to the blood than that it is
an Animal Substance. Let us see
therefore what is to be learnd from
a few Simple & obvious Experiments
The blood of a Healthy Person when
it is first drawn, after it has had time
to Cool a little, appears to be one
uniform red tremulous Conguluem.
After it has stood a little longer it
begins to separate into two Parts, Crass-

samentum a Serum. This Coagulan-
tum, by proving Spirits of Wine upon it
may be Coagulated, but if it is ex-
posed to the Air & suffered to Putrefy
it dispolves & liquifies, and when
it is once dispolved by Putrefaction
it cant be coagulated by Alcohol
Spirits. on the other hand when it is
Coagulated by Spirits of Wine there
is no Method that we have yet dis-
covered, which is capable of resolving
it. Spirits of Wine have likewise the
Power of hardning the Solids, and these
two Effects sufficiently account for the
great difficulty in Curing Diseases which
proceed from hard Drinking. Liquors
have their Livers generally affected, or
obstructions are formed in some of
the[s] of their Viscera, which are often
productive of Dropsies. I am sorry to

say it, but I can vouch for the truth
of it, that the Ladies of this age are
too much addicted to hard drinking.
& I am confidently of Opinion that
a great number of their Complaints
proceed from it. But whatever be the
Consequence, whether Dropsy or other
Complaints, if they have proceeded
any length, it is very rarely that they
can be Cured, they may Linger on for
a considerable time, but they can
never be compleatly Cured, they can
only be Palliated. I was called not
long ago to visit a very worthy Lady
for whom I had a very great regard,
She was ill, & I apprehended that her
Complaints proceeded from the Cause
I have been mentioning, accordingly,
tho She was then walking about the
House, I informed her friends that I

did not think She would recover it,
and agreeable to what I predicted,
after lingering for some Months, She
died within this fortnight. I have since
been told by some Ladies of her acquain
tance, that She used to drink very
freely, that they had often seen her
disguised, & that they had seen her
come a Visiting with her much liquor
the Assistance of Drink, above what
was natural. But to proceed.

We observed before that our Aliments
consisted of, Oily Mucilaginous, Albug-
inatic or Watery, Saline & Earthy
Parts, all these Principles
are to be found in the Milk in the greatest
and I may now add that the more
Mucilaginous they are the more
Nourishment they contain, & hence

Gellies & all Gelatinous Substan-
ces are justly esteem'd extreamly Nu-
tritious. Chyle Milk & the Human
blood will be found to contain just
such Principles as those I have been
mentioning. Chyle & Milk when
Runnet is added to them separate
into Curds & Whey. Blood, when
it is suffered to stand for some time,
as we before observed, divides into
Serum & Crassamentum. In the Whey
of Milk, & in the Serum of blood, there
is contained Water, Salt, & Coagula-
ble Lymph, as appears from Chyme-
al Experiment: and this Coagula-
ble Lymph, which is a Mucilagi-
nous Substance very much resemb-
ling the Whites of Eggs, by the appli-
cation of heat or of Spirits of Wine,

may be coagulated till it is as hard as horn or as Amber.

The Crassamentum of blood & the Curd of Milk very much resemble one another. In the Curd of Milk the Cream is contained which is analogous to the Oil of Aliments, and it is that which gives Mellowness to Cheese, for Cheeses made with Skimed Milk, are as hard as a board & can scarce be cut with a Hatchet. In like manner the Crassamentum of blood contains the red oily Particles, which you may wash out till the Crassamentum becomes perfectly white by poring water upon it. take notice & stir it about in blood before it is Could, & you may collect the Crassamentum, leaving the Serum red

+ blood therefore according to the
same author may be denominated
red Milk & Milk white blood
without any very great impropriety

Particles floating in the Serum.
or if you let a Person bleed into warm
Water, the Coagumentum will form
itself into a Scum on the top and
you may Skim it off very easily.
Now the red Particles are of an oily
nature, there can be no doubt, since
it is proved by Experiment, for Gau-
tier says that they flame when fire
is applied to them, like Oil or Cream
as any other inflammable Substance.
The Coagumentum & red Particles
are the most elaborate Part of all the
Animal Fluids, and it is the Coagu-
mentum & Coagulable Lymph, which
forms the Tough Coat upon the Blood
But this Tough Coat or Buff often times
is not to be observed in the first days of a
Fever, not even of a Pleurisy, & the reason
of it is pretty plain & obvious, for it

Cont

Bleeding has generally been
look'd on by Physicians as a certain
rule for bleeding & there are some Physicians
amongst my Acquaintance, who look
upon themselves at liberty to bleed
as long as there is any of it to be seen
on the blood. This was the case with
as Dr Rotheram told me
those Physicians who attended him
while he was ill of an acute
Rheumatism from gout to true
Rheumatism. They continued to order
V.S. to be repeated for no other reason
than because there was blood, till in short the last
ance on the blood, till in short the last
his strength was so much exhausted
that he very difficultly recovered it.
he verily believe that if they had per=
sisted in following that rule they might
have continued to bleed till they had
drawn every drop of blood out of his body

does not appear till the circulation
has been exerted & till the blood has
for some time undergone the Violent
action & attrition of the Vessels.

This Buff however is subject to
very great diversity in several ac-
counts. if for instance the blood trick-
els down the Arm while it is drawing
from a small Orifice, if the Bandage
is too strait, or if the Skin slides over
the Orifice so as to prevent its flowing
in a full Stream, in either of these
Cases, this Buff will be no appearance
is no certainty attending it. tis true
that whenever it appears, it in general
argues too increased a heat and de-
tion of the Vessels, which V.S. is calcu
lated to lessen, but even this may often
is carried too far, & proves very prejudi-
cial.

This Buff is by no means always to

be look't on as a Morbid appearance.
Persons in the highest health have for
the most part the greatest share of it.
take at any time blood from a hearty
labouring Country farmer & you may be
sure to meet with it, & you will always
find ceteris paribus, that his strength
is in proportion to it. A Horse that is
vegorous & active, that is fit for Hor-
hunting, that can follow the Hounds
from morning till night & can do all
that you could require of him has
the greatest share of it. But take that
same horse & turn him out to Grass
till his blood shall lose this Buff
& become what is generally called good
blood, & he will grow much weaker &
feebler, in short if you continue him
there for some time, his blood will
become thin & Watery, & instead of
doing the days work I have been describ-

he will sweat & Pant on using the
smallest Exercise, & if he is a Horse
of Spirit he will soon run himself
Still he will drop down dead under
you. Sizy blood in general is much
better than that which is dispoved,
as it argues a Strength & vigour
of Constitution, & in particular diseases
it is a proof that the Vital heat
is too great & that the Impetus of
the blood is too much Excited, both
of which it is very easy to lower
to any pitch we please by bleeding
but when the Constitution is weak
when the Circulation is slow and
languid, as is indicated by a dis-
solved & watery blood, it is very
difficult to restore strength and
Vigour to them by the use of Cordials.
We have now showed you what are

the Effects of the Action of the Solids upon the fluids, & what are the different Parts which the Animal fluids consist of. I have at the same time told you that there is little to be learnt from the Chymical Analysis of them, & that it teaches us no more than that they are Animal Substances. But from their Spontaneous Separation we see that they chiefly consist of Crassamentum & Serum which are pretty near the forms in which they appear in the Animal body. The Proportion which these bear to one another it is very difficult to determine, for they differ in almost every Constitution, and yet a certain Proportion for the preservation of health seems to be necessary. The fluids are no doubt much greater in quantity than the solids & there have been many

attempts made to determine what
proportion the Fluids bear to the So=
lids. for this Purpose Dr Hall set
dryed an Animal till all the mois=
ture was entirely evaporated, & then compard
its weight with what it had been
before when it was entire, but this
Experiment is subject to very great
Deception, for by this means either
a Part of the Solids may be also
Evaporated by the Heat, or a great
Part of the Fluids may be confined
in the Solids, & by Evaporation are
converted into Solids —
Another Experiment of this was, to
draw off all the blood which would
run from an Animal, but this too
is very fallacious, for an Animal
dies before you can draw off one half
of the Circulating Fluid. Suppose
for Instance that an Animal weighs

200 Pound, it will die when 20lb of
blood is drawn off which is no more
than ¼o of its weight. This I have often
proved by Experiment. And yet tho the
heart cannot continue to act after
1/10 of the blood is drawn off, yet as
well from a deficiency of the blood
sent to the Brain, as for want of a
sufficient Stimulus, there might per=
haps still be three times the quan=
tity of circulating fluid remaining
& lodged in the Muscles, the Glands,
the Bones & in the small Branches
of the Veins & Arteries which could
not by this means be Extracted.
Upon the whole I believe we may
determine the Quantity of blood in
a Middle Sized man to be about
40 or 50 Pound of which 30 is con=
tained in the Veins & 20 in the Arte=
ries.

From the History [illegible]
Preview of the Constitution
and Government of Penna

Our Saviour reproaches the
Pharisees of laying heavy burthens
on others shoulders which
they were not able to bear —
The Proprietors of Pennsylva.
have done the same —
The Connection that subsisted
between the First Proprietor
and People was like that between a Father
and his Family — The latter attached
by Interest and Affection
the former, revered for the Wisdom
of his Institutions, and the Indulgent use of his Authority —
But now he is become an Overbearing Land Lord — strongly disposed to convert free Men
into abject Vassals, and
to reap where he did not Sow —
On the other Hand all who have
sense enough to know their Rights

ought to defend them
combined as One Man
the said Landlord, and
Encroachments
The Proprietor thinks he does
so honour enough by govern
ing us by a Deputy — by which
we are so much the farther
removed from the benign as=
pect of the Royal Eye, and the
more exposed to the Pressure
of Self interested Instructions

The Constitution of Pennsylv:
is derived Birth from the Birth=
right of every British Subject.
1st By Grant from the Royal Charter gran
ted to Wm Penn by King Charles
2d and 3d By Grant from the Charter of
Privileges granted by Wm Penn
as Propr and Govr to the Free
men of s.d Province —
The Birthright of every Brit:
Subject is, to have a Property of
his own, in his Estate, Person,
and Reputation; Subject only

to Laws enacted by his Concurrence ——————

The Royal Charter was grant in 1681 — A most Alarming period when the Nation was in a strong ferment — the Court forming an Arbitrary Plan, under the Countenance of a small Standing Army —— —— At this time the Charter Governments of America afforded a Place of Refuge to the Miserable and Persecuted — And as Liberty had been so Sacrilagiously Contracted at home. Pensylvania even then was made a new Asylum, wher all who wished to be free might bide for ever —— —— ——

The Basis of the Grant to Wm Penn was for the Merits and Services of Adm: Penn, and the Comm: desire of his Son to enlarge the Brit: Empire, to Promote usefull Commod: and to Civilise the Savages — There is reserved to the Crown the Faith and Alegiance of the Proprietor his Heirs

Assigns of the Tenants to
Inhabitants, as also the
overeignty thereof ——
The Proprietor and his Deputies
we invested with full and Absolute
Power, to enact such Laws as may
be for the Good and happy Go-
vernment of the Province by &
with the Advice, Assent, and Ap-
probation of the Representatives
of the Freemen of sd Province —
He is empowered to erect Courts
of Judicature, & Appoint Judges
and administer Justice in all Cases
and to carry all the Laws into
execution, unless the Same there
in excepted — Provided they be
consonant to Reason, and not re-
pugnant, but, as near as Conve-
niently may be, agreeable, to the
Laws, Statutes and Rights of
England — With a Saving to the
Crown in Case of Appeals — That
in Case of any Sort of Injustice
or Oppression, the Party injured
might be sure of Redress
In Case of Sudden Accidents the
Proprietor and his Magistrates

are impowered to make fit and
wholesom Ordinances from time
to time, for the Preservation of
the Peace, and the better Govern-
ment of the Inhabitants, under
the same Proviso as above —
To Prevent a Departure from the
faith and allegiance to the Crown
this Provided that a Transcript
of all Laws, shall, within five
years after the Making thereof
be Transmited, to the Privey Coun-
cil, where they Shall be, either
Confirmed or adjudged Void, as
they severally deserve —
The Proprietor is obliged to have
an Agent in London, who is to
be answerable to the Crown for
any Misdemeanor, committed, or
willfull Default or Neglect per-
mited, against the Laws of Trade
and Navigation, and to defray the
Damages in his Majesties Courts
as ascertained; and in case of Fail-
ure the Government to be reseum
ed and retained till Payment has
been made; without any Prejudice
however in any Respect to the Pro-
prietors or Landholders —

The King is never to levy any
Tax on the Inhabitants in any
Shape, unless it be with the
consent of the Proprietor Gover-
nor, Assembly, or by act
of Parliament in England ——
In case any Doubt should arise
concerning the Meaning of any
word or Clause in the Charter,
it is always to be construed the
most favourably, & possible, for
the Proprietor; Provided that no
Interpretation be admitted, by wch
the Allegiance due to the Crown
may suffer any Prejudice ——
In the whole of the Charter, as
little as possible is left to future
Instruction — Not is there to be
found the least Shadow of Pretence
that such Instructions should
be Laws

Wm Penn sets out like a Man of
Conscience; acts as a Man of Reason
he Proceeds; and as a Man of the
World, he offers the most Plausable
conditions to all, that he might gain
I have

Preaching to his fellow adventu-
rers, in Bow Church Street Lond-
He says, Any Government is free
to the People (Whatever be the fram
) where the Laws rule, and the Peo=
ple are a Party to those Laws and
more than this is Tyranny, Oligar=
chy, or Confusion. — To support
Power in Reverence with the Peo=
ple and to secure the People
from the Abuse of Power, that they
may be free by their Just Obedience
and the Magistrates honourable
for their ~~Pa~~ ~~Rais~~ Just administra-
tion, are the Great ends of all Go-
vernment ——

But when the Sense of Dependenship
from the Mother Country to y^e
Colony; the Deposit ment of the Le=
gislator shifted too high of the
Plane of God now appeared, and more
of the Man of the World — One
Point he carrys against the Indi
cations of his Followers; namely
the Reservation of Quit Rents
which they had remonstrated again
as a Burden in itself and added to
the Purchase Money, made without

Precedent in any other Colony—
But he artfully insinuated, That
a Government must be Supported
with Splendor and Dignity, and
that this Expedient would exempt
them from other Taxes —
He used much artifice to Prevail
with the People off the Province
to unite in Legislation and Go
vernment, with them of the Lower
Countys — by which a Way was
found out to lay aside That, and
to Introduce another Charter, by
which all the Benefits and Ad=
vantages that were granted to
the Provinceals, were equally com
municated to both — Now,
this was very Artfull in the
Proprietor, altho the King had
not granted him the Government
of the Lower Countys, as the
Duke of York had done the Soyl
For, if the King should assume the
Government of the Countys aforesaid
the Charter of Privaledges of the
Province would be Void, and Thunder
may be at Liberty, to impose what Charter
he pleased —

In less than three Years after Penn's arrival, the Dispute that arose between him and Lord Baltimore, furnished him with an excuse to return home— Tho the true cause, was his attachment to King James II. who was thenon the Throne, from certain obligations he was under to him, & not from Principle— The Princes irresolute Plan of Restoring the Roman Ritual by universal toleration seems To have been almost inspired by him He engaged himself so warmly in his Majesties behalf that he fell under some injurious Imputations He left the Province to be govern'd by five Commissioners of State, the Provincial Council, and the General Assembly— We find the Assembly and Council at Variance about their respective Powers and Privileges. And What is more extraordinary we find the Proprietor in the Year 1688

enjoining his Commissn: to dissolve the Frame of Government by his late Charter constituted They not being able to carry the Point, in 1688 Capt John Blackwell was appointed Deputy Governor, He was a Cunning Man who thought to make Such dispays of the Proprietary Power that he would awe the Majority of the Inhabitants into Proprietary measures_ But he met with a Laudable Opposition ——— The Proprietors Interest gained very little ground in the Assembly In 1693 The King and Queen resumed the Government of the Province into their own hands, It does not appear under what Pretence, Whether to gratify any Displeasure conceived against Mr Penn or in Concert with him Colonel Fletcher was appointed Governor of New York and Pennsylvania by one and the same Commission, as if there was no such thing as a Charter extant ———

However at his coming the Assembly had Spirit and Resolution enough to open their first Session with the following Resolution Nem: Cont: That the Laws of this Province that were in force before the coming of this Governor, are still in force, and that the Assembly have a Right, humbly to move the Gov: for a Contin: or Confirm: of them All which he did, after a good deal of altercation, except one relating To Shipwrecks ——

In 1696 Markham was appointed Lieutenant Gov: to the Prop: now reinstated in the Government. See the Constitution of Government Fol: 34-36-36 ——→

Alterations made by Wm Penn 36.

37 — Three Members were to be chosen for the Council, and six for the Assembly out of each County — But afterwards only four were allow: of ——

The Duties of Privileges do it now stands Fol: 43 Agreed to by ye Prop^r & tors in Person 1701 ——

the Territory Men Rejected the
Charter, upon which, the
Province, in Virtue of that
Charter, claimed a Separate
Representative of their own
which in Point of Number
was fixed at 8 Members for
the three Counties and 2 for the
City of Philada — now — constituted by the Prop: & recited
Charter — — The Proprietor
left them in this separate Condi-
tion — And from this time, the
time of Gookins being Deputed,
Governor there was nothing, but con-
one Continued Scene of Dis = The
cention and Controversy, subsisting
between the Different Governors
and Assemblies — The latter con-
plain very heavily of the Prop:
limiting the Power of his Deputy
whereby they were denied those
just Rights and Privileges as free
born British Subjects — for he con-
not Confirm to them their Char-
ters of Privileges without such

amendments as were distinctive of their Constitution — That ye Proprietor had Promised large privileges to the firs Settlers, and grant several Charter, but by his Artifices had brought them all at his Will and Pleasure to defeat — That they had given him great Sums of Money, for negotiating the Confirmation of their Laws, and for making good terms at Home for the People of the Province, all which he had neglected, And many other failures of complaince of on the Prop: Part — The Assembly was Gloriously tenacious of the Rights and Claims of the People — They drew up 13 Articles of Mal-versation, by way of Impeachment, against Logan, the Prop: Minister, to prove which they offerd to produce Witnises, but Evans and Gookin being both Indigent, they thought fit to a[illegible] any Legal, least yt should gain [illegible]pleasure —

To be a Deputy Governor is to
have two Masters, One who gives
him his Commission, the other pays
him his Pay— If he does not
fulfill every Command of the
with Rigour, he is in Danger of
being recall'd,— and if he does
not gratify the Assembly in
what they think y have a right
to claim, he is certain to have
Perpetual Brocks— and to be
Governor upon such Terms is the
be the most Wretched thing
Alive ——— ———

Sir Wm Keith behaved himself
very well during his Nine Years
Administration, Inact many
Salutary Laws, tho Displeasing
to the Prop: and restored Trans
quility to the Province But fe
thro the Malevolence of Logan
the Secretary

the Prop: in the Commission he
gives to his Deputy, Reserves to
him and his Heirs, a Final Af-
sent to all such Bills as he Pas-
ses into Laws_ Which by the way
if Done not Invalidate the Who
Commission, is at least Void
in it self_ And Whatever Laws
the Lieutenat Governor shall
so, cannot be annulled without
the Asent of the Assembly——
The Prop: also takes care to im-
pose Conditions of Government, un-
der the Penalty of 2 or 3000£
The Prop: is Lord of the Soil_
and No Person can Purchase Land
of the Natives without his Per-
mission by this Means he can fur-
nish himself with what Quantity
he please at his own Price, first
disposing of what he has bought.

7

Cathart:

Pulvis

℞ Extract Jalap:
Scammon: aa ℈ vi.
Pulv: e Chel: C. ℥ß.
Sacchar: Alb: ℥j. misce

℞ Cast: Vit:
Crystal: Cast:
Sal: Polychrest: aa ℥ß.
misce.

℞ Sen: ℈ xxv.
Cast: Vitriolat: ℈ v.
misce.

Elect: Purg:

℞ Pulp: Tamarind: ℥ij
Cryst: Cast: - ℥ij. misce

Cap: quantum N. M. omni hora —

Bol: Cathart:

℞ Pulv: Rhei ℥ß.
Syr: Ros: Sol: q. s. f. bol.

℞ Jalap: pulv: ℥ß.
Syr: e Spin: Cervin: q. s.

℞ Scammon: ℈ x.ij.
Cast: Solub: ℈j.
Extract: Glycerij: mucil: q. s.

℞ Pulv: Jalap: ℈j.
Scammon:
Pulv: e Chel: C: aa ℈ß
Syr: e Spin: Cerv: q. s.

Pil: Merc:

℞ Merc: Calcinat:
Extract: Rheb: aa ℈ij
Balsam: Peruv: q. s. f. Pil ij
1 pro dos:

℞ Natis: gtt ij
Extract: Jalap: ℈ss.
Crypt: Cart: ℥ss
Syr: e Cort: Aurant: q.s.

℞ Jalap: pulv: ℈j.
Mosc: dulc: gtt v
Syr: Ros: Sol: q.s.

℞ Gamboj:
Mosc: dulc:
Spice: Aromat: aa ℈ss.
Syr: e Spec: Cassiæ: q.s.

Immanagoj:

℞ Aloes Socot: gtt viij
Sooc: gtt iv
Peperis Jamaic gtt ij.
Ol. Sabin: gtt ij.
Conserv: Rut: q.s. —
Fil: Cathart:

℞ Aloes Socot: ℥j.
Spec: Aromat: ℥ss.
Cammon: ℈j
Extract: Glyc: mol: q.s.
ut fiant Pil xxx. v pro dos.

℞ Asa fœtid:
Gum Ammon:
Myrr:
Aloes
Rubig: ferr, pp
Extract: Gent: aa ℈j.
Syr: Zinziber: q.s. ut
fiant Pil xxiv. iv pro dos.

Haust: Cathart:

℞ Sal: Glaub:
Mann: aa ℥vi.
Aq: bullient: ℥iij.
Tinct: Cardamom. ℥j.
misce

℞ Aq: Cinnam: vulg: ℥vi.
— Cardamom: ℥ij
Spt Lavend: Comp:
Syrup: Croc: aa ℥ij
misce —

℞ Aq: Rjp: Jamaic ℥vi.
— Anisi Comp: ℥ij
Syr: e Cort: Aurant: ℥ss.
misce —

℞ Aq: Fenic: Anethi: ℥vi.
— Fenic: Carui: Com: ℥ij
Syrup Zinzib: ℥ss.
misce —

Julep: Hyst:

℞ Aq: Fœnic: Simp:
— Castor: aa ℥ij.
— Fuleg: Spt ℥ij
Syrup: Simp ℥ij.
misce —

℞ Aq: Alex: Simp: ℥vi
— Fœn: Cardamom: ℥ij
Spt Lavend: comp:
Spt Volat: Aromat: aa ℈j.
Syr Caryoph: rub: ℥ss
misce —

℞ Aq: Fœn: Anethi: ℥iv
— Menth: Rjp: Simp: ℥ij
Tinct: Cardamom:
Syr. Zinzib: aa ℥j.
misce —

Julep: Refrig:

℞ Vin: Rhen: ℥v.
Aq: Ros: Damasc ℥ij
Succ: Aurant: Hispalens:
Syr: Violarum aa ℥vi
misce —

Pulep: Stomachi:

℞ Aq: Menth: Simp: ℥vi.
Spt. ℥ij.
Syr: Croc: ℥ij.
misce. Cap: Coch: j. vi –

℞ Aq: Menth: ℥vi
– Sem: Cardam: ℥ij
Syrup: Simp: ℥ss.
misce – Coch: j – vi –

℞ Aq: Cinamom: Simp ℥vi
– Nuc: Moschat:
Tinct: Stomach: aa ℥ij
Syrup e Cort Aurant ℥ss.
misce Cap: Coch: j – vi –

Bol: Febrif:

℞ Pulv: Cort: Peruv: ʒi
Cascarill: ℈ss.
Mucilag: Sem: Cydon: q.s.
at fiat bol:
Elect: Peruv:

℞ Extract: Cort: Peruv: ℥i.
– Liq: Campech:
– Glycerin: aa ℥ss
Mucilag: Sem: Cydon: q.s.
ut fiat Elect:
Vin: Peruv:

℞ Pulv: Cort: Peruv: ℥ij.
Vin: Rub: ℍij
digere per horas 48: tum col:

Pil: Mere:

℞ Merc: Dulc: ʒss.
Extract: Guiac: mol: ℥i.
Ol. Ament: Sap: gtt x. misce
fiant: Pil xx. j. vi pro dos:

℞ Merc: dulc – ʒss
Camphor: ʒss.
Extract: Guiac: mol: q.s. f.
Pil: xx dos: j. vi.

℞ Merc: Dulc: ʒss.
Pulv: Amet: q.s. f. Pil v. j pro
dos:

℞ Spec: Aromat: ʒiss
Consery: Lavend: ʒij
Syr: e Cort: Aurant: q.s. ut
fiat Elect: cujus cap: mdem
n. m. sexta quaque hora –

Bol:

℞ Pulv: Cort: Comp: ʒss.
Syr: Papav: errat: q.s. f.
bol:

℞ Rad: Contrayerv: ʒss.
Syr: Croc: q.s. f. bol:

℞ Rad: Serpent: Virg: gr xv.
Confect: Alkerm: q.s. f bol

℞ Serpent: Virgn
Rad: Contrayerv: aa gr viij
Croci: gr iij
Syr e Meccon: q.s. f. bol:

℞ Camphor
Croci aa gr v
Confect: Alkerm: q.s. f. bol.

℞ Camphor:
Sal: Nitri aa gr xv
Syrup Caryophyll: ~~aromat~~ rub: q.s.
fiat bol:

℞ Morch:
Confect: Card: aa ʒij. m.
fiat bol:

℞ Morch:
Sal: C. C. aa gr x.
Camphor: gr vi.
Syr Croc: q.s. f. bol:

℞ Camphor: gr x
Extract: Hyeb: gr j:
Syr: e Cort: Aurant: q.s. f. bol:

Pil. Alex

℞ Sergent: Virg:
Rad: Contrayerv: ää ʒj
Syr Croc: q.s. ft. Pil: xij
Cap: ij sodis quoq: hora.

℞ Morch:
Flor: Benz: ad ʒj
Bals: Peruv: q.s. ft. Pil
xij Cap: ij ℈a quoque hora

Julep: Alex:

℞ Aq: Alex: Simp: ℥vi.
Spt — ʒij.
Syrup: Caryoph: Rub: ʒij
misce.

℞ Aq: Alex: Simp: ℥vi.
Spt cinn acet: ʒij.
Syr e Succ: Limon: ʒj.
misce.

℞ Camphor: — ʒj.
Sacchar: Alb: ʒʃs
Acet: ℥j. misce.

℞ Aq: Cinnam: Simp: ää ℥iij
Cort: Aurant: Simp: ʒij
Nucis Moschat: ʒij
Syrup Cort: Aurant: ʒʃs
misce.

℞ Aq: Foeniculi ℥vi
— Junip: Comp: ʒj
Syr: Caryoph: rub: ʒʃs.
misce — Elect: Refrig:

℞ Coriand: Tugul: — ʒi.
Pulp: Tamarind: ʒʃs.
Spt: Vitriol: q.s. ad grat: acid:
Syr: e Succ: Limon: q.s. ut f. Elect.

Inct:

Bol:

℞ Pulv: Ipecac: ʒj.
Syr: Simp: q.s. f. bol:
℞ Vit: Alb: gr xxv
Convers: rosar: q.s. f. bol
℞ Vit: Alb: ʒj
Part: Inct: gr ij
Coriand: Gnorb: q.s. f. bol.

Diurct:

Pulv:

℞ Sal: Prunell: gr x.
Sal: Succin: gr iv.
Ol. Terebinth: gtt ij.
Sacchar: Alb: ʒj. misce.

Bol: Diurct:

℞ Scill: recent: gr vi.
Pulv: Aro: Comp: gr x
Zingib: — gr v.
Syr: e Cort: Aurant: q.s.
f. bol: —

℞ Cantharid: gr iv.
Extract: Hyb: gr ʃs.
Nitr: — ʒi.
Syr: Balm: q.s. f. bol.

Pil:

℞ Sap: Venet: ʒij
Sal: Succin:
Nitr: ää ʒʃs.
Ol. Junip: gtt x. m.
Form: Pil no. v. pro dos.

Pil Merc: ℞ Merc: dulc: ʒʃs.
Ant: Iod: ʒi.
Bals: Peruv: q.s.
Pil: x. j. ij pro dos.

℞ Merc: dulc:
Sulph: Ant: Praep:
Aloes Socot: ää gr v.
Syr: balm: q.s. ft. Pil v. j. pro dos

℞ Cantharid: Pulv: gt xvi.
Extract: Hyb: gt iv —
Nitr: — — — ℥i
Terebinth Venet: q.s. ft Pil:
no. iv pro dos. —

Haust:

℞ Oxymel: Scillit: ℥ss.
Aq: Cinn: Simp: ℥i
Spt Lavend: Comp:
Syr e Cort: Aurant: aa ℥i.
misce

℞ Acet: Scillit: ℥i
Sal: Absinth: ℥ss.
Succ: Limon: ℥vi.
Aq: Cinnamon: Simp: ℥ss
— Menth: Pip: vel: Spt: ℥ss.
Syr: e Cort: Aurant: ℥i
misce —

Sudorif:

Pulv: ℞ Rad: Contrayerv: gt x.
Serpent: Virgin:
Croci aa gt v. misce

℞ Rad: Serpent: Virg: gt x.
Nitr: gt vi.
Camphor: gt iij. misce

Elect:

℞ Confect: Alherm: ℥i
Zingib: Condit: ℥vi.
Rad: Contrayerv:
— Serpent: Virg: aa ℥i
Syrup: e Cort: Aurant: q.s.
ut fiat Elect. Cap: ℥ss quarta
quaque hora.

Lecture 8?

From the Facts already laid down before us we may proceed to treat of the Effect of bloodletting. We remarked what was the rout the blood took in the course of the circulation, & likewise took notice that its composition was then & Sense according as it is differently acted upon by the force of the Solids, These things it is worth while to remember:

Now the Effects of a loss of blood are two fold upon the Solids, but on the fluids it acts only singly. it relaxes & promotes the Vibrations of the first, but its Effects upon the fluids is only to thin, & then attenuate them.

There is no difficulty in conceiving how bloodletting should relax the Solids, since the Vessels being filled with blood must necessarily keep them distended, but the difficulty is to understand how it can promote these Oscillatory Vibrations. This however is as true as the former, Nor let it be remembered that it is necessary, for the Circulations going on equably, that there should be a certain Proportion between the quantity of the Fluids & the force of the Solids, for when the Quantity of the blood is too great, the fibres are kept too much upon the Stretch, and are consequently rendered incapable of acting, & hence the Pulse in Plethoric Persons is often oppressed, and in this case it is always relieved by bleading

Huxham advises the Young Practitioner if he should be anyways doubtfull in this case, to apply his fingers to the Pulse in the other Arm, while the Patient is a bleeding, and if it beats stronger & more open he may be sure that he is in the right, & as long as it rises he may continue with safety.

This Rule is very universal & will apply to all Diseases proceeding from Plethora, the Solids of the Human body in this respect, are much like a Bow, which when over bent it looses its force, but after it is relaxed it again in time recovers itself. In like manner when blood is drawn, the fibers are put lax upon the stretch, there is less blood thrown into the Cavities of the Heart, & less is thrown out from them into the Arteries.

A Lethargic Stupor is a very frequent Symptom in a Plethora proceeding from an Oppressed fullness of blood in the Brain, how often too do we meet with Haemorrhages from ruptured Vessels, all these are relieved by bloodletting. V. S. therefore promotes the Circulation in a Plethora, but in all other cases it weakens it. for Since the blood is the cause of the Contraction of the Heart, if it is sent in too small quantity to that organ it of course must weaken it. A full hard tense & quick Pulse, which prove that the Circulation is too much excited, always require it. Galen tells a Story of a Young Gentleman he was called to see, who Labored was under a fever, at the time when Hippocrates he came he found him sleepy and

with a full quick & throbing Pulse
& he was raving with a Delirium.
He immediately ordered him to be bled
very freely, & he stood by while the
Operation was performing. In short
he suffered him to bleed till the De-
lirium quite left him, & the People
standing by were so much surprised
with the suddenness of the Change
that they cried out Jugulated him, We can therefore at any time
lowes the Vis Vitæ as much as
we please by blood letting.
But that the Circulation of the blood
is also sometimes promoted by bleed-
is proved by a Case related by Sydn-
ham. A hearty young fellow was
seized by a Stupor & Lethargy. He was
rendered unfit for performing the duties
of life, & remained quite heedless and

insensible, on examining his Pulse it
was Oppressed & Labouring. He ordered
him to be bled, & immediately ~~to be bled~~ one of
the most Violent fevers broke out, that
he had ever an Opportunity of Observing.
however he was not at all surprised at
this, as he knew very well what was
the matter, but ordered him to be bled
a second time, & after it was twice &
thrice repeated he began to recover,
& in short by this Method he effectu-
ally Cured his Patient. Upon the whole
Whenever the Quantity of blood, with
respect to the Solids is too great, V.S.
must always be usefull, whereas
whenever it is under Par it is al-
ways hurtfull. If we blad in the
Nervous or Putrid fever, it will often
not be in the Power of Medicines
or Cordials to raise the Pulse, but

in the Inflamatory Fever it is alw
ways in our Power by the help of
Vene Section to lower it — In an
Inflamatory Fever therefore bloo —
letting is always indicated in a
Nervous or Putrid Fever seldom if
ever. Strong & robust People al —
ways bear bleeding very well, but
weakly Persons are always the
worse for it.

I before observed that the one E —
fect of bloodletting was to thin the
fluids. This is so manifest that I
have more than once known a Drop —
sy lost or merely from too great
a discharge of blood from a wound
or bloodletting. take ever so strong
a healthy a Man or by bleeding him
plentifully it is ten to one but you
may throw him into a Dropsy. The

Reason is because so much of the Confa-
mentum, is Evacuated by this Operation which
is the Densest Part of the blood, is
Evacuated by this Operation, it is
likewise the most Elaborate Part,
& is the Effect of much Action. It is
Strong & Elastic Solids, & therefor is
not easily repaired. It is an easy
matter to fill up its Place with
thin & watery Juices. but it is not
easy to supply the want of so much
blood, as is readily seen by the Patient
It is no difficult matter to throw
in a Pound of broth into the Con-
stitution, but it is difficult to re-
store that Strength & firmness to a
Man which he had before a Pound
of blood was drawn away from him
Hence we see that the Effects of
bloodletting are more permanent than

those of any other Evacuation. by
Urine, by stool & by sweat, it is
only the thines & more watery Parts
of the Fluids, that are drawn off,
whose Place may again very soon
be supplied by Diluting Liquors,
but this is not the Can with V.S.
and there always is a Proportion
between the Strength of a Person &
the quantity of Crassamentum in his blood.
Vessel but we can form no judg=
ment of this from the appearance
of the blood, because this differs so
much according to Circumstances.
for if the blood is kept in a warm
Place it is almost all of it convert=
ed into Serum, but if it is exposed
to Cold & frosty weather it almost
all remains Crassamentum, & this too
in Persons who are active people in

every respect equal. this however
may be held as a very universal
Maxim that whenever there is too much
Cvacuamentum V.S. is always usefull
but when there is too much Sevum it
is always hurtfull -
Whenever you meet with a Stagnation
of the blood, where the fluids have
not room to circulate on account
of a Plethora, as appears by a Stupor
Inertia or especially if these Symptoms
happen after being accustomed to
drink much wine or use much
Exercises, or if the Pulse is full
tense quick & throbbing, which Indi-
cate that the Impetus of the blood
is too much excited, or if the fluids
appear to be too dense & viscid, in
all these Cases, you may be assured
that great benefit will arise from V.S.

But on the other hand, if the circulation is too weak, if the Pulse is feeble & languid, or if a Girl for instance labours under a Chlorosis it is ten to one, if you bleed her, but what you throw her into a Dropsy, & if a Patient is already Dropsical by drawing blood away you will certainly increase the Collection of the Waters. in general, whenever we want to Equill the Circulation by warm Sudorifics. or wherever we think that Confectio Cardiace is Indicated V.S. must certainly prove hurtfull it is like throwing water upon fire with a view to make it burn brighter In Nervous & Putrid fevers therefore in general it is death & distruction to draw blood from them -

Bleeding is in general much more useful
& necessary in the Country than it is
London. After having been used to see
the repeated & plentifull bleedings
that were prescribed & with very good
success in the Country, I was surpris-
ed upon coming to London to see with
how much timidity they prescribed
it at St Thos Hospital. instead of
twelve or fourteen Ounces which we
did not scruple to take away two or
three different times, they seldom
ventured to order above seven or eight
& were very Cautious in venturing to
have the Operation repeated. At first
I thot this was trifling with the Dis-
orders & was sure that this could be
of little use to the Patient, but I soon
found that notwithstanding these small
bleedings it was very difficult to reve-

=vent the Pulse from Sinking, and
the Disease from degenerating into a
Putrid Fever. In short I have so often
since seen the truth of this verified
in my own Practice, that I never bleed
in London without fear & trembling.
There is such a strong disposition in
all Fevers to turn Putrid that we
are to be extreamly Cautious in using
it. I can at any time, & have frequently
with a great deal more freedom given
my Patient Ounces. As there are
very few Fevers in the Country, what
requires bleeding, as there are very
few in London that will admit of it,
and these always affect Strong and
robust Persons, but Puny, Tender, de=
licate Patients are always hurt by
it. May so opposite are then two
different sorts of People, that I will

venture to say that there never was
yet a weakly tender Delicate Patient
affected with an Inflamatory fever,
not a strong robust Man, unless he
had been greatly exhausted by bleed-
ing or other Evacuations, affected with
a low nervous fever. however these
are generally pretty easily distinguish-
ed from one another, & the Pulse
will generally indicate whether we
are to bleed or not.

The Point now comes to be disused
what Part it is best to draw blood
from. this Question has been much
agitated by Physicians, & there have
been very numerous & powerfull Ad-
vocates for both Sides of it. the Antie-
nts believed in the Doctrine of revul-
sion & Derivation, by the first of which
they meant to draw away the blood from

one Part of the body to another, by the
second the draw or derive the blood to
a Part. Thus in Obstructed Menses
they made use of derivation, & in Case
of wasted Limbs or the like they that
by drawing blood from them, to turn
the Current of the blood & to make it
flow into them with the greater impe-
tus. but in Diseases, of the head &
where there was too great an Accumu-
lation of blood, they made use of re-
vulsion. And indeed there have been
some strong Advocates for this Doctrine
even within these 50 years. but the
generality of Physicians now adays
are pretty well agreed in thinking that
if there realley is any difference is a ge-
neral fullness of the blood, it is quite
a Matter of indifference Yet not-
withstanding I have known some very

judicious & sencible Physicians, who
have in some Cases been extreamly par-
ticular about what Part they ordered blood
to be taken. but this is a meer trick
& done out of compliance to the humours
of the People, whose Prejudices it is the
interest of every Physickean to humour
as much as is consistent. In Obstructed
Menses therefore they are very carefull
to order blood to be drawn away from
the foot rather than from any other
Part of the body, for this exactly cor-
respunds with the long received Opinion
of the Old Women, & they would call
him a fool as a Madman that would
order as any other. In an Apoplexy, in
stead of bleeding at the Arm, by all
means open one of the Jugulars, for
there is a great Appravates & shew of
Art with in this which take wardly

with the Vulgar. but, depend upon
it, wherever there is a real occasion
for bleeding, where the Arteries in
general are too full, or where the
circulation of the blood is too much
excited, it is entirely a matter of
indifference from what Part you
blead, & whenever you bleed under
these Circumstances you will always
find it usefull. but if on the other
hand, there are none of these indica-
tions for bleeding that I have just
now laid down, bleed from what
Part you will & you may be sure
of doing a detriment to your Patient.
The Doctrine of revulsion & Derivation
is a mere Joke, & there is no solid
Argument, but what can be easily
overturned, that can be offered in support
of it. all we have to do is to chuse

a Vein that will bleed most freely
for there is a great difference in the
Advantage arising from bleading
according as the blood runs more
or less freely. I have often known ℥xij
taken in a full Stream do much more
than Sixteen Ounces when it bled but
slowly. It is likewise of much more
service in Inflamatory Diseases to
take away a large quantity of blood
at once than to submit the affair to
small & repeated bleedings. The
Impetus of the blood is more imme-
diately taken off, & instead of being
more & more impacted by the Vis a
tergo into the Inflamed Part, there
is for a time as it were a retrograde
motion, and for this reason in Plu-
risies & all highly Inflamatory
Diseases, it is no bad rule always

to bleed at Deliquium Animæ, and in
Cases where the Symptoms are very
urgent, to prevent the Patients faint-
ing too soon, it is best to do it in
a reclining Posture, by this means
I have known more benefit received
from drawing XX Ounces at once in
the beginning of an Inflamatory fever
than from three times that quantity
taken by small bleedings but at
repeated intervals. Dr Rutherford
of Edinburgh used to order ℥xx℥j
to be drawn at once, but this rule
must vary greatly, according to the
Age & Constitution of the Patient, and
where you may take away 18 or 20
Ounces in the Country, I have ob-
served that we dare not venture to
take above 10 or 12℥ in London.
Upon the whole, the Effects of blood-

letting are merely Mechanical, as
in a Hydraulic Machine, if it was
over Distended or overloaded with
any fluid, you would naturally let
some of it out to restore an Equi=
librium, & to let the remainder Cir=
culate more freely, and you can
always tell by the Pulse & by the
Appearance of the Patient when
V.S. will & when it will not prove
useful —

Questions in Natural Philosophy

See Martin's Philosophical Grammar.

What is 1st Natural Philosophy
How many rules of Philosophising
are there? What is the 1st 2d 3d 4th
Rules? What is the Only Method
of Proceeding in Nat. Philosophy?
Wt the Synthetic? Wt Analytic?
Is it Probable
that all matter is one and the same?
Wt are the Principles to wch Oxygen is to
reduce all Matter? Wt are the Gene-
ral Prop.s of all Matter? Wt the
Extension? How many fold is it?
What is the Ratio of these Dimen-
sions to others of like kind respec-
tively? Whats Solidity? Is it de-
monstrable that Impenetrability is
a Property of all Matter? How?
What are the Figures that Make a
Plenum? What is Divisibility?
How Demonstrable that Matter is
Infinitely Divisible? Whats Mo-
bility? Whats the Vis Inertiæ of
Matter? From whence Does it arise
Whats Attraction? How can it be
accounted for? Whats Repulsion?
Wt the Proportion to

What the Proportion of the Force with which Bodies attract?
How many kinds of attraction are there? What is the attraction of Cohesion? Wt its Laws?
How are the two first Laws demonstrated? How the 3? How ye 4th and 5th? How ye 7th? How ye 8th? In what Proportion do Glass Tubes attract? Can Water ascend in them? How is the Lenticular Curve formed? What the Reason that Glass cannot be Wetted with Mercury? Why are Some bodies Hard and others Soft? Some fixed, others fluid? Some Elastic? Some non Elastic?
How may we account for the Growth of Plants from the Doctrine of Cohesion? How from the Circulation of the Fluids in Animals
What the Reason of Soldering Metals? of Melting? of Ebullation of Vapours? of Drops? of Distillation? What Filtration and the reason of it?

Whats Sublimation? What Precipitation? Whats Crystalization? What y Reason of Each?

Can we account for Volcanoes? Earthquakes, Damps &c from Cohesion & Repulsion, and how? How account for Fermentation?

Whats Magnetic Attraction? Whats its Laws? Are these Laws of it Constant and uniform?

What Cause can be assigned for the Inclination and Variation of y Needle? How many degrees has it been observed to incline or Dip?

Is its Variation Regular and fixed? How may Magnetic Attraction be reduced Visible? What will destroy magnetic Force? How can artificial Magnets be Made? Whats the Attraction of Gravitation? Is there a different kind of attraction from Cohesion? If so How Proved? What are its Laws? Is there absolute Levity in any Body?

Can there be an absolute Plenum?
By what Arguments can it be de-
monstrated that there is a Vacuum?
How is the absolute Weight of
Bodies Estimated? How do we es-
mate the Density of Bodies, Une-
qual in Bulk and equal in
quantity of Matter? Is the Velo-
city of all Bodies descending fre-
ly by Gravity equal? In what di-
rection? In what Proportion will
a Body be attracted on the Surface
of two Spheres of Unequal Bulk
but Equal Density? Are the attrac-
ing forces of Spheres Proportional
to the Squares or Cubes of their di
ameters! If a Perforation was made
thro the Earth and a Body let
fall would it stop at the Center
What the attraction of Electricity.
What the Reason of its Name!
Does it appear to be of a quite
different kind from that of Cohesion?
Of how many sorts is it?

In what do they Differ? What are the general Properties of Electrical Attraction? Can a Bottle be Electrified more and more at Pleasure? What is to be Electrified Positively? What Negatively? When a Bottle is Electrified at the Bottom negatively, and at the Top Positively how can the Equilibrium be restored? What form of a Body best Draws off Electrical Fire by Attraction, from another Electrified Body? By what can Electric Fire be Thrown or Drawn off from a Body? By what means can the Repellency between a Cork and an Electrified Iron Ball be destroyed so as it Ball will attract the Cork? Where is Probably the Residence of grand reservatory of Electric Matter? What are Electrics Per se? Will these conduct the Electric Fluid?

Is Lightning the Same with Electric Fire? Why are Lightnings often crooked? Are Clouds Electrified Negatively or Positively?
What is Probably the Reason of a Thunder Clap? Is Electric Fire the same with Culinary Fire? Do ye Particles of the Electric Fluid Attract or Repel Each other? Can they be condensed? Is Electric Fire accumulated on the Surface or in the Substance of ye Bodies Electrified Does it appear Cold or Hot? Cold
What is the Cause of the Electric Shower of Sand? What is the Reason why the Electrical Apparatus will not Produce the same effects in Wet as in Dry Weather?
What is Motion? What is absolute Motion? What is Relative Motion? What is the Motion Perceived by us when in Bodies moving the same way with unequal Velocities? What when moving contrary ways?

What when Moving the same way
with equal Velocity? How may
we discover the absolute Motion
of Bodies? What is accelerated
Motion? What is retarded Motion?
What Equable? What to equably
accelerated? Wt Equably retarded
What is the Velocity of motion?
The Velocity of a Body in Motion
being given what will be the Space
passed over? The Time given what
the Space? Space given what y velocity? The Space & y Time?
Neither Time nor Velocity given
how do we estimate y Space?
What is the Momentum of Bodies?
How are we to estimate the force
of Bodies in Motion? In what
Ratio is the force of the same
or equal Bodies in Motion?
What is the first Law of Motion
From What Cause does it arise?
Wt y Second? What will be the
Effect of one Body with an assign

degree of Velocity (Suppose B Strikes an equal Body at Rest) How is the Velocity after the Stroke, in any Such cases, of non Elastic Bodies to be found? What will be the Velocity of Bodies after the Stroke, if being equal in Moment they meet? What if one with 10 Velocity meet another equal with 8? W^t if one with 12 Velocity overtake and impinge on another with 8? What if A of Quantity 3 V. 10 Impinge on B. 2. 2 at rest? W^t if A. 2. 3. V. 12. overtake B. 2. 2 V. 6—6? ——

See Fol: 13 ——

What is 3d Law of Motion
How is this Demonstrated
Why do nonelastic Bodies re
fuse the impressions made
upon them? Why do elastic
ones rebound? How does it ap=
=pear that any Motion in Elas=
tic Bodies is destroyed by a
Stroke, Seeing their Parts restore
themselves
What is the Rationale of Flying
What . . of Swimming
What . . of Rowing
What are the Properties of
Motion in Bodies Descending
freely by the force of Gravity?
How does it appear that their Velo=
cities is proportionate to the times
How — that the Spaces are as
the Squares of the times —
How can the 6th Property be Proved

What is the Ratio of the times to the Spaces?
Suppose a body fall 16 feet in 1"
what is the ratio of its Momentum?
Will a Body falling by Gravity ever come to a uniform Motion?
Whether will a big or small Body soonest come to a Uniform Motion?
Whether with a swift or slow Motion soonest —
Will an Arrow be less time in rising, being projected upwards, than in falling —
What are the Properties of Motion in Bodies descending on an inclined Plane?
In what does these agree with the Properties of a free Descent by Gravity — What is the Ratio of one to the other — Whats the Difference of time in descending the Diameter and another Cord of a Circle —

What is the Difference of their Velocities at the Lowest Parts?
What's a Pendulum?
What is its Laws and Properties?

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What if an Elastic Body A
2 D. V. 10 meet B 2, 2 V 5
What if A 2, V 8 meet B. 2, V 12
What if A V 10 meet B. V 0
What's Compound Motion?
What's its resolution
How are forces resolved
What's the Ratio of the force
of an Oblique Stroke to a
Direct one and Vice Versa
What's the Difference between
elastic and non Elastic Bodies
as to Oblique Percussion

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By w^t Ratio is the length of the
Pendulum determined? Where is the
Centre of Percussion in a homogeneous rod? Of What Uses is a Pendulum besides the Measure of time

By w^t Rules can any height be
determined by it? How does it
help to determine the figure
of the Earth? What's the fittest
Matter for a Pendulum? how is the
fitness or unfitness of the Mat=
=ter determined?
How is a Cycloid formed? What
is Properties? What a Projectile?
W^t the Amplitude? W^t kind of a
line does it describe and why
such? What Elevation will give
the greatest Possible Amplitude?
In W^t time will a Projectile des=
cribe its line? What will be the
difference between the time of Bodies falling
Projected horizontally or a Plane
and one drop from the same
Height? Since the Surface of
the Earth revolves at the rate
of Several Miles in a Minute, how
can we account for the Descent
of Perpendicular Projectiles to the
same Place from whence thrown?

What are the Central forces?
How do you account for the Circular motion of a Body about a Circle?
Whats the Projectile force?
What Proportion does it bear to the Centrifugal?
Is the Quantity and Matter considerable in a Bodies Centrifugal force? Let the revolving Bodies be supposed equal, then if the Times are equal but Circles unequal, whats the ratio of the Centrifugal forces? What if the Celerities not the Circles are Equal? What — if the Circles are equal? If the Central forces not the Circles are equal what will be the Percodical time? What if With unequal Circles the Celerities are equal? What if neither the times nor the Velocities are Given? When are the Centrifugal forces as the Squares of the Distances Inver

Give the Reasons for all these
Whether is Gravity greates at
the Equates or at the Poles?
How — find the Proportion betwee
them? How — the force of
gravity at the Moon?
How can we account for the lit
fferent Gravity at the Equator
and at the Poles?
Whats the centes of Magnitude
What — of Motion? What —
of Gravity? What are the
Properties of the Last?
Where is the Centes of Gravity
in Spheres, Circles, Squares &c
Where — in a hallow Cone or
triangle? Where — in a Solid Cone?
Where in the Human Body?
Why do some Bodies Stand fowes
and that when inclined?
Why some roll others slide?
How can the Centes of Gravity lose
when the Body rises?

How account for the Self filling
Bucket? Whats a Common
centes of Gravity? How found.
How discover the Common Cent
of Gravity between the Earth
and Moon? how between the Sun
and any or all the Planets?
What are the Mechanical
Powers? Why so called?
Whats a Lever? Whats an Equi=
librium between the Weight and
Power? See Fig: 9 Plate 6.
How many kinds is the Lever
and What are they? What is a
Proportional Ballance?
What is the Ratio of the Power
to the Weight in a Steelyard?
Whats the advantage of raising
weights by a Pulley? how es=
timate the force of Several Pul
leys combined? of Fig 7. 8. 9 of
Plate 8th

What Ratio between the Weight
and Power in the Axis in Peritrochio
What in the inclined Plane?
What — as to the Wedge?
What — as to the Screw?
What allowance at a Medium are
to be made for friction —
Is friction Proportionate to the
Surface of Moving Bodies —
From what Cause does it arise?
How may it be remedied? What are
compound Machines? When are
they in greatest Perfection? What
is a Jack? Is the Power, and Resis-
tance to be overcome? Of What use
is the Fly? Does it increase the
Force of the Engine? In Clocks &
Watches what is the Power, and
resistance to be overcome? By what
Machinery is the Power in a Watch
kept Equal & uniform through the
time of its going? Whats the connec-
tion between the Second Wheels?
Whats an Orrery? How does that work
See Plate 12 Fig

Whats a Cometarium? How is
that in Fig 2 Constructed and
wrought? What the Power and re-
sistance in Water Mills? Is the
Motion of the Water Wheel Equal
or accelerated? How can the force
of the Water be found? What the
Construction of a breast Mill?
Wt of an Undershot Mill? In Wind
Mill what the Best Position of
the Sailes, Direct, right, or Obliqued
Wt Degrees of Obliquity? What De-
grees of Obliquity are best? In Wt
Ratio is the force of the Wind
in the Saile? How may this
Ratio be Determined by the Table
under Anot: 46 Art 24.? Under
What angle with the Stern, Will
a Rudder easiest turn a Ship? Or
the Gates of a dock on a River
easiest Sustaine the Pressure of
the Water? What are the remark
able Properties of Wheel Carriag
-es

What is Hydrostatics?
What is a Fluid? How does it ap-
pear that Fluid Particles are
Small? How - that they are Smooth.
How that they are round? How
that they are Tondevous? How
that they are incompressable?
How that a Fluid has Weight
in its Proper Place, as well as
in Vacuo?
Is the Pressure of a Fluid Distinct
from its Gravity? Does it Press
upwards? Does it Press in any
other Direction but up and down
Or what Proportion is Lateral
Pressure? Why is the Surface
of a Fluid even? Why Spherical?
Why can we not observe that
Sphericity in a Pail or Bowl of
water? At what Distance will
we begin to lose Sight of an
Object on a Plane Such as the
Sea - How may the Quantity of La-
teral Pressure be calculated?

Whats the difference between
this and the Pressure on the
Bottom? Whats the Ratio of
the Whole Pressure on the Sides
and Bottom, to the weight on
the Bottom? How shall we find
the Bottom Pressure in a Vessel
of a triangular or other Oblique
form? Whats the Difference
between the Actions of Solids
and fluids? Is the Pressure
of the fluid on the Bottom, al-
ways to the quantity of Matter?
How is the Hydrostatic Paradox
explained and Demonstrated?
Will a Solid be of the same
weight in a fluid as in Vacuo?
If not whats the Difference?
and why such? Will Bodies
of unequal Bulk that are in
equilibrio in Aire be so in Water
Whats the Difference between
absolut and Specific Gravity?

How is the absolute weight found? How the Specific Gravity? How the Magnitude? Can a Body Specifically lighter than Water sink in it? If in part what is the Proportion of the Part to the Whole?

Can a Body of equal gravity with a Fluid, ascend or Descend in it? By what Gravity do any Bodies Descend in a fluid? Can a Body lighted than a fluid rest at Bottom or one heavier swim? What is the Hydrometer? How used to Determine Gravities? How are they Determined by the Hydrostatick Ballance? Can the Specific Gravity of Fluids Determined by weighing the same Bodies in them Severally? Can that of Solids be discovered by weighing them in the same Fluid?

Will the Specific Gravities of Bodies be the Same in Summer and Winter? How may we find the Pressure of Water against a Sluice? The Magnitude and Weight given, how find the Specific Gravity? How find the Quantity of Gold and Silver in Their Crown the Specific Gravity of the Compound Being 16 and that of Gold to Silver as 19 to 11? Of What use can Hydrostatics be to Physicians Druggists; Miners &c —

If a Body move in Different Fluids in what Ratio will it be resisted by them?

If two different Globes of equal quantity of Matter and Velocity move in the Same fluid, in what ratio resisted? If the Same Globe move in the Same fluid with what different velocities will the resistance

What is Hydraulics? —
From what Cause can the
ascent or Descent of fluids
be accounted for? Why does
the fluid in Fig: 5 Plate 16
rise in the Duct as high, and
no higher, than in the reser-
voir? How account for the
running of Rivers? The Canal
being the same, will the Depth
of the Stream of Water con-
tinue the Same? If not Why?
Will a River come to run
with a Uniform Velocity?
How are Rivers so Continu-
ally Supplyed with water?
How acct for intermitting
Springs? How for recipro cat-
ing? How for Water rising in
the bended Syphon? How for
that in Jet d' eau, s? Why does
the Jet rise so high as the foun-
tain?

In what ratio are the Momenta of Spouting fluids?
In what their quantity and velocity? From whence will a Spout have the greatest Amplitude? Does an Horizontal Aqueduct cause a greater or less Amplitude? Does a Perpendicular Aqueduct retard or accelerate? How does it appear that the Pressure of Air will cause fluids to ascend?
By what means does water rise in Pumps? Is it the Best form of a Pump to have the Pipe and Barrel equal? if not in what Ratio should the one be to the other?
To what height can the Water be raised by a Simple Piston in a Pump? How does the forcing Pump work? How the Lifting? How the Marcuard? How does Newshames Engine work Plate 25 Fig 1 —

How the fine Engine Dig 2?
What is the Eclipse? What is
it use? How appear that wa-
ter is moved and varied by
Attraction? How account for
the Tides of flood and Ebb?
Why are they at the same
time in both Hemispheres?
What is the reason of Spring
Tides? What of Neap tides?
Are the opposite tides of
Flood always equally high?
Why are the tides Daily about
an hour later? Why is it not
always high water, when the
Moon is in the Meridean of
the Place?
Why have we not the Highest
Vernal and Autumnal Tides
when the Sun is in the Equinox?

What is Pneumatics?
What are the Peculiar Properties
of Air? Is the Air contained in
Bodies of an elastic or fixed
state? If the latter how does
it appear? Can Air be generated
or destroyed by art? If so how?
Is Air heavy? If so how can
the Weight of it be ascertained?
Is it all homogeneous or of the
same Specific Gravity? What
is the Mean weight of a Cubic
Inch of Air? What is the
Barometer? What form is Best?
How can Heat to be measured
by the Barometer? From any
Experience was the Air's Elas-
ticity? In what Ratio do the
Particles of Air repell each
other? What is the nature and use
of the Sea Gage? In what Ratio
is the Weight of Air to Water? &
In what to Mercury? Is the Air
all of an Equal Density?

Most, in what Ratio does it decrease? How might the height of the Atmosphere be Discovered if the density were Equal?
What is its real Weight?
How investigated? What is the weight of this on a Square Inch or foot? Why does not such a Weight crush us to Pieces?
By What Experiment is the Weight of this demonstrated? By What the Spring of the Air? What is the Ratio of its Weight to its Spring? And how is that Ratio Demonstrated? Is air Necessary for Animal life? Is it Necessary for fire and Flame?
Is it Necessary for the ascension of Smoke? Is it Else Sound Can that be Burned? If so, will it answer for the Uses of Animal life? Has the Air Influence in Putrefaction? Has it on the Growth of Plants?

How may we account for Persons
descending deep into Water, in
a diving Bell without it's Being
filled with Water? What is the
Rationale of Cupping?
What influence has the Heat on
the Air? What the Cold? How do
we find their different Degrees?
What's the Best form and Mat.
for a Thermometer?
What's an Hygrometer? What's
the Best kind? How does it show
the Moisture of the Air? How
does an Air Gun discharge?
What's the form and Manner of
Working the Air Pump? What's
Wind? What's the cause of a Cur-
rent of air? Can it Blow from
different Points to One and the
Same Place at the Same time?
What's the Reason of General
Eastarly Winds, under the Equator
in the Atlantic Ocean? Why are
the Trade Winds Generally in the

Atlantic and Pacific Oceans, from
N. East and S. East? How may
the Several Monsoons be accounted
for? How — the Tornadoes? X
Why do the Trade winds Blow
upon the Land on the Coast of
Africa? Why are the Winds any
where Variable? Are there Tydes
of Air? If so, to what height will
they arise? What is, Least, Great-
-est, and Mean Velocity of the
Air? How Discovered? ———

X How is it that the Air at
the Poles are not exhausted
seeing the Winds always blow
from them, towards the Equator?

What is Sound? By what Means
is the Sensation of Sound excited,
What's the Concha of the Ear?
What's the Meatus Auditorius?
What's the Membrana Tympani
What the Malleus? What the
Incus? What the Os Orbiculare
What the Stapes? What the Ves-
tibulum? What the Cochlea?
What the Eustachian Tube? What
the Auditory Nerve? Why do Peo-
ple generally open their Mouths
when hearing very attentively?
If What kind are sonorous Bodies
How is Sound Propagated as in
Plate 33 Fig 4 to B? In what di-
rection are the Waves of Sound pro-
pagated? How comes it that
the to Pass, that the same Sound
is heard by Persons at all Point
from the Sounding Body
In what Ratio does the Density
of Aerial waves decrease?
Why so?

What is the Greatest Distance at
which Sound is Audible? With
what Velocity does it Move?
Whether Greatest in Summer or
Winter? Has the Wind any Influ-
ence on the Velocity of the Sound
What Difference is there in the
Extent of Waves Excited by the
Same Stroke, with the reason
of the Answer? Are the Sounds
caused by Different Bodies at one instant
if so, what is the reason?
What is the Cause of an Echo? Under
what Angle are the Particles of
Air reflected from an Obstacle
Where is the Audible Place?
At what Distance must the re-
sounding Object be, that the Echo
may be distinct? In Can Distances
of Objects be measured by an
Echo? By What means does the
Speaking Trumpet increase the
strength of the Sound? In what
Ratio increase it? What is the
best form of such a Trumpet?
Why So?

Is there any Difference between the
Strongest and weakest Sounds,
with respect to Velocity? What is
the reason of Different Tones, as
Grave or Acute? In what Ratio
will the Times of Vibrations of
Musical Strings be to each other.
If other things equal, the Lengths
be as two to one, What the Ratio
of their Vibrations? What if
their Diameters are as two to one,
What if their Tention be as 4 to 1?
In what Ratio is the Tone of a
Flute? What is concord in Mu-
sic? What - Unison? What an
Octave? What a Diapente? What
the Diatessaron? What is the Di-
atonic Scale of Music, and how
explained? What notes make a
Perfect Concord &c? What Harmon-
ical Prop^n between 3 Numbers?
What between four? Of 3 Numbers
2 being given how shall we find
the 3^d in harmonic Proportion?
Of 4 Numbers 3 given how find the 4th

What Ratio does a series of
Numbers in Harmonic Progression bear
to each other? What is the reason
why a Musical Cord Vibrating
will cause a Neighbouring Cord
that is in Concord with it to Vibrate
tho not Touched?

Is Light a Quality of a Body?
If the latter how is it Manifested.
What its Nature? How appears
that its Particles are exceeding
Small? How does it appear that
they are of Different Magnitudes
How does it appear if they are re-
flected from every point of a
Body? How does it appear if it
Proceed in right line directions,
How is its Velocity Discover'd?
How long in Coming from the
Sun to us? How long in coming
from a fixed Star? How does it
appear that its intensity will
be inversely as the Squares of
the Distances?

Does its Velocity cause heat Light burning? If so how does it appear? Is there Absolute heat or Cold in Nature? Why not! Can the Rays of Light be Condenced? How? In what Ratio is the Density of Rays in the Focus of a burning Glass? The Focal distance given what will be the Power of burning in the Focus? The area of the Glass given — What? Neither given — What? Whats the Reason of Opacity in Bodies? What of Transparency? Are the Particles of Bodies in themselves either Opague or Transparent? How made evident that a Ray of Light reflected takes the shortest course possible from one Point to another? Whether is the strongest reflection from the 1st or 2d surface of a transparent Body? In what case will the reflection from the 2 Surface be greatest? In what Manner and by what Casualty do Light reflected

Is the Ratio of the Sine of Incidence
to that of Reflection Constant or va-
riable? What is the Ratio out of
Air into Water or Glass? What
Medium has the Greatest refrac-
tive Power? Whats the Reason
of Objects being apparently ele-
vated, seen thro Water? Why does
the Streightest Stick Put in Water
appear Crooked? ~~Why~~ Is the Sun
Visible before it rises and after
it Sets? If so - Why? How comes
it that the Orbs of the Sun and
Moon appear Eliptical, whenst in
the Horizon? Are the Rays of
Light refrangible in different
Degrees? If so - why? Of what dif-
ferent Colours are they? Which
Colours are Most or least refra-
gible? In what order Do the Rays
of Light refracted Stand? How
may this appear to be the Order?
What Angle do the least re-
frangible make with the most
refrangible?

Does a Lense converge the Rays
to one Focus? Give the Reasons
the answer? Can Objects of Diffe-
rent colours be equally seen, at
the same Distance, thro a Glass?
Can the Rays of Light be more
than Once refracted? Are they
differently reflexible? Which are
least and most reflexible? How
may this be Proved, as Fig 8 Plate
39.? What Reflects them most?
Why are the Rays of Light alter-
nately, transmitted and reflected
in such a case as Fig 4 Plate 40
How shall we find the thickness
of the Air or Water, that Reflects
any Colour, according to Fig 1 Plate
At what Distance are the Rays
transmitted and Reflected? If Light
is Wholly Transmitted, what Colour
will be exhibited? Wt if one
kind of Rays only be reflected?
Wt if several sorts? What if all
the Coloured Rays at once? Could
there be any Colour in Bodies with-
out Incident Rays?

Is Colour a Primary quality in the
Rays themselves? Does the reflec-
tion of Light depend on the first
or on the Second Surface of the re-
flecting Body? Can it be reflect-
ed from the Middle Part of
dense Medium? What Makes the
Clouds to appear of Different Colours
Can the Magnitude of the Particles
of a Body be known by their
Colour? Can it be Proved that
the Particles of a Black Body
are the Smallest? How? How
shall we find the Colour arising
from any composition of Original
Colours by Dig. 41?
By what means and in what Manner
is the Interior Bow in the Cloud
formed? How - the exterior?
What's the Breadth of each Bow? What
Distance between them? Do the Colours ap-
pear in the same order in each? Can the
Rays falling on any Part of a Drop Exhibit
a Bow? By what means can all y Colours
be exhibited in y Bow? Why is the four
nigonal?

Why is the Interior Bow of Such a Particular Breadth Fig 10. Plate 45
Why is the Exterior Bow more faint.
How can more than two Bows be formed? What are Halos? Can they be accounted for?

Whats Optics? How many fold? What Catoptrics? What Dioptrics? What are Parralale Rays? What Converging? What Diverging? Whats a Lense? What kinds are used? Whats their Axis Whats their Focus? Whats a Mirrour? Of what kinds is it? What will be the Focal distance of Parralale Rays in a Convexe Mirrour? What the Focus of Rays reflected from a Concave? Has a Plane Speculum any Focus Why not? How shall we find the Focus of an Object whose Image is formed by a Convex Mirrour? ~~In what Cases will an Object be~~ ~~must be erected~~?

How = that of a Concave Mirror
How discover whether the Focus
be negative or Positive? In what
Ratio will the Image be to its
object, Seen from the Vertex of
a Mirrors? In what Cases will
an Object be erect or Inverted?
Can a Convex Mirrors Magnify
an Object? Why not? In what
Case will the Image be Less or
greater than the Object? How
Does a Plane Speculum repre=
sent the Image? In what Cases
will it form more than one
Image? At What Distance is the
Focus of Parralale Rays reflect=
ed thro a Double Convex Lense?
At what — thro a Plano Convex
At What — thro a Plano Concave?
at what — thro a Double Concave?
How find the Focus of Rays of
a Double Convex? Where will
be the Focus if the Distance of y
object is greater than the Radius?

Where if Less? Where if equal
What of three Radius? Where
of the Rays are converged by
a Glass Globe? Where if by one
of Water? Of ye Eye.
What are the Coates of the Eye?
What is the Sclerotica? What ye
Choroides? What the Retina?
What ye Cornea? What the Iris?
What the Pupil? What the
Aqamentum Ciliare? By it
means can the Pupil be con=
tracted or expanded? What
Humours are in the Eye? Wt
and Where the aqueous? Wt and
where the Crystalline? Wt and
where the Vitreous? Where
are the Images of the Object
formed? Can it be demonstrated
by the Laws of refraction? If
such a Piece of Machinery
as the Eye will converge Paral=
lele Rays to a Focus exactly
on the Retina

At what Distance can a Sound Eye see distinctly? Why not at less Distance? What the Reason of short Sightedness? Why does the Sight grow dim thro Age By what means can the former be remidied? By what = the latter? What are the Peculiarities of the former? Whats the Greatest dis=tance at which an Object is dis=tinctly Visible? Which make Ob=jects more Distinct or Clear, Con=cave or Convex Glasses? Which greater or more Distant? In wt Proportion will an Object in the Focus of a Convex Lense be Mag=nifyed? Whats a Single Dioptric Microscope? What = a Catoptric? What = a Compound Dioptric? What a Compound Catadioptric? How many kinds of Telescopes are they? Whats ye Construction of a Re= optric Telescope? What its Power of Magnifying? Is it ye best kind?

If not whence arises its Imperfection
What's y Construction of a Catadioptric Telescope? What its Power
of Magnifying? Wt y Camera Ob=
scura? What Should be the Posi=
tion of the Lense to the Object?
In wt Direction with respect to y
Rays of Light? Wt kind of an
Image will it form? What's y
Magick Lanthorn? Wt y Solar
Telescope? Wt y Solar Microscope

Astronomy —

Whats Astronomy? Whats the
Universe? Wt ye World? Are
the Stars Suns? What different
Systems have been devised? Wt
the Ptolimean System? How prov=
ed false? Wt y Hypothesis? How
Proved false? Wt y Copernican?
At What Distance and at wt time
does Mercury revolve round his
Orbit? Wt Venus? — Mars? —
Jupiter? — Saturn? Is the Orbit
of a Planet in the Plain of y Ecliptic

Does it intersect y^e Plane?
What's the Line of Nodes?
What's y^e Projection of the Planets
Orbit? What's its inclination to
the Plane of the Ecliptic?
What's its Latitude? What's the
Argument of its Latitude?
Wt's ye Heliocentric Latitude?
What ye Geocentric? Wt ye true
and what ye Curtate Distance
from ye Earth & Sun? What y^e
angle of Elongation?
What —— of Commutation?
By what Method shall we
find ye Periodical time of a Planet
How find its Distance from ye Sun?
How reduce it to English Miles?
How Discover the Parameters of
the Planets? What's the Inclina-
tion of the Orbit of Mercury to y^e
Plane of ye Ecliptic in Degrees
&c?: What —— of Venus? —— Mars?
Jupiter? —— Saturn? Wt are the Solar
Spots? Of What Use?

What Planets have Satellites? & How many has each respectively? By what means can we determine the Moons Distance? — its Bulk In what time does it revolve on its axis? How account for its different Phasis? What is her Periodical time? What Distance from the Earth? What the Periodical time and Distance from Jupiter of his first Satellite? What — of the Second? — of the Third? — Fourth? Can we by these determine the Longitude of a Place? The Velocity of Light? At what Distance from Saturn is his Ring? What is y Periodical time & Distance of his first Satellite? W^t — of his Second? W^t — of his Third? — Fourth — Fifth? Can this be proved to be the true System from the order of Nature and reason of things?

If the Squares of the Periodical times are, as the Cubes of the Distances, and the Sun moved about the Earth, would it revolve in 365 Days, would it be at ye Distance of 20000 Semidiametars of ye Earth? If ye Sun revolved about ye Earth would the System have an equal division of Light and heat? Would not Mercury and Venus be Seen in Opposition to the Earth & Sun? — Would any Planet on the Ptolomean System, appear more Distant or of Less Bulk? Could they ever appear Direct, retrograde, or Stationary in Motion? Were the Earth at Rest would there not be a conjunction & G. of Venus with ye Sun at ye Same time in every revolution of ye former? How long time Passes between two conjunctions of Venus? Is the Orbit of a Planet Circular? What is meant by its Excentricity?

How prove that ye Earth's Orbit is
Elliptical? In what Ratio is the
Excentricity of Mercury? — of Venus
— y^e Earth? — Mars? — Jupiter?
— Saturn? How many motions has
the Earth? What are they?
What is Meant by the Procession
of the Equinoxes? In how long
time will they accomplish
a Revolution? Can the Polar
Star always be the Same?
Is the Axis of the Earth Pa=
rallele to the Axis of the
Ecliptic? Would there be any
disadvantage in its being
Parallele? Whats the use of
an Orrery? Whats the Cause
of an Eclipse of the Sun and
Moon! Why cant the whole
Earth be Eclipsed by the Moon
as well as the Whole Moon
by the Earth?

Why does not Venus Eclipse the
Earth, and the Earth the Superior
Planets? Why is not the Earth
Eclipsed at every conjunction
of the Moon? What's the Penum
bra? How formed? What's a
Comet? Of What Bulk and
Density? Of what kind is its
Orbit? What's the Reason of
its Tail?

Lecture 4

In our last Lecture Gentlemen, we showed that the Effects of an Evacuation of blood was not to fall upon the Solids but that it only tended to thin the fluids. In a Plethora where the circulation is stifled there an over fullness of blood, by taking off this we thin off the Solids that the fluid is Promoted while they are relaxed at the same time and where the Impetus of the blood is too much Lessened V.S. is of use not only by taking off the irritating Cause but by drawing away a quantity of the Dense Corpuscular Momentum it gives an Opportunity for the fluids to thin themselves for this same reason it can be of no use in Putrid fevers, because the blood

is already of its own accord too prone
to run into a Putrid Solution.
The only Cases where it is ever of real use
are a Plethora and where there is either
a general or a Particular Inflamma-
tion takes place somewhere or other in some part of the body
the first of these I have endeavours to
Explain in the Sylabus in as full
& concise a manner as possible. Vide
"The Diseases from a Plethora" to the
End of the Chapter.
We proceed next to speak of Inflam
mation, & to explain the nature of In-
flammatory affections
Diseases in general, with
it is of great importance to understan
thoroughly, because if we know this we
know all that is necessary to be un-
derstood with regard to that Class of
Diseases to which the human body is
most liable. We know for instance all

how to cure all the Diseases to
which the Animals affined the same
this, such as the Phrenetis, which is
an Inflamation of the Brain, Paraphre
nitis wch is an Inflamation of the
Diaphragm, Pleuritis of the Pleura
Hepatitis of the Liver, Nephritis
or an Inflamation of the Kidneys
in short we shall endeavour to be able
to understand the Nature & also
the Method of cure of all topical
Inflamations such as the Angina
which is an Inflamation of the
throat & the Ileum which is an In-
flamation of the Intestines, as well
as all Inflamatory fevers in Ge-
neral. For this Purpose we shall
lay down the Diagnostics which dis-
tinguish Inflamation, before we

speak of its Causes & the Method
of Cure.

"In the beginning of a febrile
Inflamatory" ——— "bound."

In Inflamation as in every
other Disease we should endeavour
to Characterise it by such Symp-
toms as are called Pathognomo-
nic or are Peculiar to that Dis-
eas, and at the same time will
apply universally to every Species
ces of it. This however is not
always to be done for there are
some Diseases which are only
to be distinguished by a Syn-
drome of Symptoms, but not-
withstanding the great variety
of Evils we generally hear our
Patients complain of, there are

for the most Part a few preca-
liar to every Disease which at-
tend every Species & enable us to
characterise it. Then in the Case
of Inflamation are reduced by
by Boerhaave to a very small
number, but even all the Sy- but
I think he mentions but three
or four Symptoms as Pathog-
nomonic, but even these must be
reduced to greater Simplicity for
for they dont all apply in every
Case of Inflamation. The mus-
tions Pain for instance as one
Sign of Inflamation, & it is
very true that in most Cases it
takes Place, but in an Inflam-
mation of the Brain, tho the
Patient is mad, raving & distracted

yet he complains of no Pain nor
is he sensible of any nor in the Lungs
when the Parenchematous Substance
only is affected. Pain therefore is
not an Absolute Sign of Inflam-
mation. It is true that in an
Inflamation of the Brain the Patient
is Mad, raving & distracted, but
he complains of no Pain nor is
he sensible of any, nor in the Lungs
unless the Pleura is affected when
the Membranes rub against one
another is affected. in all other
Cases however except in these two
I have mentioned Pain is Chara-
cteristic of an Inflamation
Pain tho alone is not sufficient
to Distinguish the Disorder, for
there are other Pains of a different

sort. there are for instance Pains
of the Side from Spasm, some of
which return Periodically. there are
too its is true Inflamatory Cholics
but I have known Periodical and
Spasmodic Cholics where the Pain
was as violent as in any Inflam-
mation. And it is of great use
to distinguish between these two
different sorts of Pain because the
method of Cure is extreamly dif-
ferent. if in these two last Cases
you were to attempt the Cure by
blood letting & Antiphlogistics
as in Inflamation you would
ruin your Patient, whereas Lau-
danine Clysters with Opium or
the Balsam of Peru with Opium
are the only remedy—

An Inflamatory Pain is always
continual & unremeting, & pasno-
dic Pain comes by fits and Intervals
An Inflamatory fever it is true
is sometimes easier, sometimes more
violent, but then it always has
a fever attending it, in so much
that I have never met with an In-
stance of internal Inflamation
without fever, especially if the Pain
was of the throbing kind. but if
the Pain is Intermeting & not attend-
ed with fever, you must not treat
it with Antiphlogistics & V.S.
Depend upon it if is not of the
Inflamatory kind. We come now
to the Causes of Inflamation.
I remarked to you that the Pulse
was quicken'd, & soon became full

tense a hard beyond its natural
state." There is but one objection to
this hardness of the Pulse in an Inflam-
mation and that is in the case of
Inflamed Lungs where the Vessels
are so much Obstructed that the
blood can't with freedom pass thro
them, in which case the Pulse must
necessarily be soft, but at any rate
the Pulse is always quicker than
natural." "This can only happen"
—"and the like" from so trifling
a Cause as a thorn or Splinter
in the finger I have seen an In-
flamation extended all the way
up the Arm even to the Shoulder
which has brot on a violent fever.
"But as Inflamatory Diseases"—
—"febrile Complaints." Boerhaave

was the first who gave any acct. to
of the Causes of Inflamation, but
as he knew nothing of the Nature
of Irritability in the living Solids
& consequently did not apply the
Doctrine to his reasonings on the
nature of Diseases it cant be
supposed that his Theory should
prove satisfactory. Obstruction
is the only Cause that he admits
of Inflamation, & it must be
confessed that his reasonings &
thereupon are very ingeneous
but yet I think the Arguments
he builds upon are not sufficient.
Could in my Opinion as
the only universal Cause that
of Internal Inflamation, for all
universally complain of Cauld,

they say they have been exposed to
it by some means or other, Some-
times it proceeds from leaving off
a Garment that one has been used
to wear, sometimes from drinking
cold Liquors when one has been
over heated with Exercise, at other
times it from is occasioned by go-
ing out of a hot room into the
Cold Air or by a hundred diffe-
rent accidents which it is not
necessary for me to recapitulate,
nor am I obliged to account for
the manner in which Cold acts
to produce this Effect, it is suf-
ficient for me to know that Cold
is the Cause & that it is the only
Cause of internal Inflamation.

It is very common for People to make very light of a Could, but from this it will appear that the Slightest Could is an Affair of greater Consequence. When Dr Ratcliff asked his Patient what was the Matter & he replied that he had nothing but a Could, why what the Devil would you have, can you expect any thing worse than that. Damp rooms are as frequent a Cause of Persons Catching could as any thing. Mr Martin

Lecture 8th

We have already spoke of V.S. & the Effects it produces & also of the Modus Operandi of Stimulating Medicines. We shall now, having sufficiently prepared the way, proceed to treat of some of the Particular Diseases, beginning first with those that are most Simple, for by that Means we shall the more readily be able to understand those afterwards which are of a more complex nature.

To begin therefore with the least complicated Diseases is to begin with those of a Simple Fibre, & these may be divided into two Classes, those from too relaxed & those from too rigid a fibre, we shall now

speak of those Diseases which proceed from too much relaxation. & from being acquainted with these we shall be able to understand the whole Class of Chronic Diseases. we shall for instance be able to understand the nature of the Chlorosis the Dropsy, the Rickets, the spontaneous degeneracy of the fluids, & in short all the Diseases that depend upon too much laxity. just in the same manner as a knowledge of Inflamation teaches us the nature of all Inflamatory Diseases.

"The causes of relaxed Solids"

"to recover their tone"

These are very few, if any, causes of Relaxation but what may be included under one or other of these five different heads. As to the first of these

which speaks of a defect of Nu-
trition, It is very certain that since
our present being & Existence de-
pended upon the aliments we have
taken, we could not long remain in
our present Situation without a
continual Supply of proper nou-
rishment, our bodies are continually
x going to decay, they are constantly
a wasting away by the Offices of
life, & therefore stand in need of
a perpetual Supply of proper Nou-
rishment to make up for that which
is expended. take the Strongest
Horse & Starve him for a while &
he will soon become weak & feeble
& ~~will soon~~ entirely unfit to perform
that Labour which you might other-
wise reasonably require of him.
Give Sheep a Bird upon to spare diet

or give it bad & improper food and
it is ten to one but it becomes Rickety
& a General relaxation will come
on for it matters not whether the
Quantity of good food is Diminished
or whether it is Deficient in Point
of Quality. Hence we see that Sea
faring People are seized with the
Scurvy, the grow languid & inert
not from a want of food, because
they have plenty of Salt Provisions
but from a defect in Quality, it is
too harsh to be subdued by the Con-
coctive Powers, the Organs of Di-
gestion are at last impaired, and
the body is not sufficiently Nourished
2dly" It langues Circulation &c
is mentioned as another Cause of
weakened & relaxed Solids, and very
justly, for Muscular Motion is also-

butely necessary for the Strength o
rigour of the body. Ceteris paribus,
the more Exercise we use our bodies
will be the Stronger. that is if the
Exercise is not too Violent, but we
should at the same time make use
of a great deal of Nutritive Diet:
and if the Diet & Exercise are well
proportioned to one another it tends
fair to render our bodies the Strongest
possible. What they call training
of a Horse is no more than giving
him all the Strength of which he
is Capable for this Purpose they
first of all give him Physic to
get his Stomach into a proper Con-
dition for receiving & Digesting his
food & then they give him a great
deal of very Nutritious Aliment.
at the same time they regularly
every day give him his Exercise

which is Galloping him 2 or 3 times
round the Course, & is to all intents
& Purposes the same thing which
we mean by Muscular Motion.
The Bruisers, when Bruising was
in fashion a few years ago in Lon-
don, used to undergo pretty nearly
the same Discipline. Stevenson
the Bruiser told me, that when
he was under keeping a Le Call
it, he used to ~~Live abortively~~
upon & walk 30 Miles every day
& he live upon Eggs & such like
nutritive Diet entirely. In England
where for a Stag hunting are so
much in use, this Hunters would
never be able to go thro the Ex-
ercise were it not for this Gal-
loping & high feeding, hence they
will run you a Cap Hedges and

Ditches & every thing that comes in
their way for 5 or 6 hours, may I have
followed the chase as hard
as I could ride from Morning to
Evening & my Horse never seemed
yet
to mind it. It is on account of
the Exercise that they use that
Country People are in general
so much stronger than those that
live in Cities & use little or no
Exercise. In short there is nothing
in the World that makes so great
a difference amongst Mankind
with respect to their Health, as
the difference in their using Exer=
cise. take two twin brothers that
are originally as much alike
in their Constitutions as it is
possible, and let one of them be
bred up a Student, wholly busied

it is to pore over his books and to
live a Sedentary life, with his Mind
continually upon the Stretch while
he is eages in the Pursuit of some
Speculative Subject ~~matter~~, let
the other again be bred up in
a way quite the reverse of close
thinkeing while his body is kept
in continual Exercise, in short
let him be bred up a Country
Labourer, & how great will be
the Difference between them when
they come to years of Maturity.
You shall find the one Vigorous
~~& Active & as Strong as a little~~
Hercules a Poor Puny low Spirit-
ed Hypochondriac Sickly thing
complaining of Pains rumbling
& Wind in his Bowels, while the
other is Vigorous & Active & as Strong

as

as a little Hercules. take another
Example. Hackney Post Horse
Horses which are every day accus-
tomed to the severest Exercise, have
much more Labour are the fit to
undergo than Gentlemens Coach
Horses which are fat & Pampered
at Home, but never go out more
than five or six Miles a driving
in a Morning. Thus their owners
know very well & therefore never
venture to go a long Journey with
them but when that is necessary
always hire Post Horses.
It is for want of Exercise that
almost all the People of Condition
in England are Nervous & Hypo-
chondreac they seldom stir out
but in their Carriages. the Ladies
never go a Visiting but in a full

Dress, & even those that cant afford
to keep a Carriage of their own
generally go a Visiting either in a
Chaise or more commonly in a
Hackney Coach. Things are very
different now from what they tell
you of the Days of Queen Elizabeth
before Coaches were so much in use
or scarcely invented. The Women
then were a Set of Amazons, and
the Ladies used to go and break-
fast with one another on Cold
Round of Roast Beef of a Morning.
and nothing was more common than
for them to come to Church to St Pauls
of a Sunday on Horseback.
I have often had an Opportunity of
observing how great the difference be-
tween People even in the same Village
in the Country according as they are

differently employ? You may generally observe 2 sorts of People in these Villages, as I used to take notice that while those who followed these business in the fields as Labourers were all strong Vigorous & Alert, the Girls who kept at home a Lace Making, & sat continually upon their backsides under their Pillows, were in general Pale wan & sickly, low Spirited, subject to Obstructions & eat up with the Green Sickness.

3dly Great & profuse discharges" &c

This we have frequent Occasion to Observe as a cause of Relaxation, in those who have suffered a great loss of blood from wounds the Piles, too great a flow of the Menses & such like, but it not only a discharge of the blood itself, but a preternatural increase

of any of the Excretions may be pro-
ductive of relaxation. hence we see
how weak & feeble Persons are apt
out of a Salivation. & Diarrhea or
Purging will reduce the Strongest
Man in a short Space of time to the
lowest State possible, & we observe
the same Effects happen to those who
are troubled with the Diabetes.

4ly "Passions of the Mind"

It is very strange & unaccountable
the Connection that there is betwixt
the Mind & body, but it is very cer-
tain that they have an admirable
Effect upon one another. For we
see will often take off the attention
of the Mind from the most agreeable
thoughts, & Anxiety of Mind on the
other hand, will often make us forget

of Religion

the greatest inconvenience that our Bodies can be subject to, but if the Mind only primarily is affected we always find that the Body too suffers for it. hence Fear, Doubt, Anxiety, & even Love, for People even now a days are sometimes in love, are often productive of Relaxation & Love I believe is as frequent a Cause as any of that Hypochondriac or low Spirited ness which is the Consequence of too much relaxation, so frequently observable in Trades People, for upon enquiry I generally find upon enquiry that they are Distressed in their Mind on Account of some Defect in their Circumstances. Fretting will at any time bring on Nervous Diseases, but that is not all Close application of Mind of any sort

especially if joined with a Sedentary
life, will be very occasion Relaxation.
It is no matter what Subject the Mind
is engaged about, it is sufficient
that it is kept upon the Stretch &
the attention fixed upon one particu-
lar Object. She does not Do to be
confined, but the Imagination must
be suffered to rove at Large as much
as the body to preserve the health
of it, nor does she bear any more
than that to be over exercised, for
her Strength may be over done, &
then like that She will always
be the worse for it, hence we see
that Mathematicians Divines and
Persons of close Study are Generally
Hypochondriac.
5ly "An over Distention or Distraction

of the fibers" &c —

Every body knows how tedious &
difficult it is for a Sprained Ankle
to recover itself, & how much more
Subject it is to the like accident
from its greater weakness, than
if that had never happened to it.
and so it is with other Parts of the
Body that have been over Distended
the Skin of the Abdomen of a Woman
that has had a child seldom recovers
itself & becomes smooth & even but
remains Pursey & wrinkled —

We shall next speak of the Cir-
culation of the blood —

And here I can't help observing
that it is very strange that a thing
which to us appears now so plain &
obvious should lye hid for so many
Ages. for it was not till about the
1619 Years that the circulation of
the blood was found out, which was
a discovery that was reserved for
our Countryman the Immortal
Harvey. From this it appears that
the human body is no other than
a Hydraulic Machine, tho the
most perfect & compleat in the
whole Universe, & possess of Qua-
lities & properties superior to any
Invented by
Immediate workmanship.

Before this time the Animal Oco-

nomy was very little understood
the Phenomena that appeared could
not be any ways satisfactorily ex-
plained by the most penetrating
Geniuses, their whole Reasoning was
very absurd, & in short till this dis-
covery was made all their Theories
were very defective, & this I think.
ficient proof of the great utility
of it.
It is a question that may very na-
turally be asked, how far it may be
proper & usefull to study the Anti-
ents? and I know that there is no-
thing more frequently & more strongly
inculcated on the Students of Me-
dicine. But this Question must
not be answered apposetely but mod-
estien restrictions, for it depends

much on the intention for which we
read them. if it is for Theoretical Theories,
I think it is plain from what has
been said, that there can be little
use in them. we know a thousand
times more than ever they knew, &
we reason upon things in a manner
very different; the Antients have
discovery of the Circulation has
thrown quite a new light upon
the Subject, & therefore their Theo-
retical Writings can be of very
little use to us. But some of their
Works may be read with very great
Advantage. I mean those which con-
sist of Facts & Practical Observa-
tions, for these will hold good, &
will ever continue the same, whatever
might be their or our reasonings
upon them. If for instance Hippo-

crates knew that Palloy was pos-
sessed of a Purgative Quality. we have
reason to think that it is a well
continued the same to Latest Poster-
rity. if he found in his Practice
that V.S. was serviceable in the
Cure of Fevers, we may depend upon
it that it is so still, w[h]atever rea-
sonings may have been formed con-
cerning it. if it appears from his Obser-
vations that Particular Diseases
had a particular way of performing
their Crises, if for instance he found
that one gradually terminated by
Urine, another by Stool, & a third
by Perspiration we have the greatest
Reason in the World to think that
the same Diseases will have the
same Termination now a days — But

the Case is quite different with respect to that Theories, which are absurd, inadequate, & no ways sufficient to explain the Phenomena that appear in Diseases, and this gives a sufficient proof of the great utility of the Diskovery of the Circulation.

In giving a Description of the Circulation, I shall begin at the Heart which is the origin & first mover of it. And here the blood is first received from the Veins into the right Auricle, from whence it passes into the right Ventricle, after that it is thrown out of the heart into the Pulmonary Artery, which divides itself first into two large branches, one of which is sent to the right, the other to the left side of the thorax, where they are again divided

into almost an Infinite number of
smaller branches, which are distribut-
ed to the Several Lobes of the Lungs.
these are again collected by an equal
number of corresponding branches
which convey the blood into the Pul-
monary Veins, & from thence into
the left Auricle of the Heart. the
blood after this passes into the left
Ventricle, which throws it out into
the Aorta, & thence into the whole
Arterious System, in so much that
there is not the smallest Part of the
Body but what is supplied with
a branch of an Artery from the Aorta.
Here again there are corresponding
branches of Veins which convey the
blood into larger & larger channels
till at last it is collected into one
large trunc call the Vena Cava, and

again it reaches the Heart.
The Vessels we have been speaking
of viz: the Arteries and Veins, are
furnished with Valves or Floodgates
which direct the current of the blood,
thus in the Arteries these Valves open
themselves towards the Extremities, &
give way to the blood as it is pro-
pelled from the heart, while they
shut themselves close & prevent its
returning, but in the Veins the con-
trary takes place, for they open so
as to admit a free passage for the
blood towards the heart, but prevent
its returning again towards the
Extremities, and hence one would
think from Anatomy alone, we might
easily have been able to judge of
the course of the Circulation.
Thus we find that there are Valves which

form a Partition between the right,
or what is more properly called the
Anterior or Superior Auricle & Ven-
tricle & prevent the return of the
blood from the Ventricle into the
Auricle. When the blood is thrown
into the Pulmonary Artery, it is in
like manner prevented from returning
into the right Ventricle by Valves
which are placed at the entrance
or mouth of that Artery. In examin-
ing the left inferior or posterior
Auricle & Ventricle, the same thing
may be observed which we have just
now mentioned, for there is a Valve
to prevent the return of the blood, from
the left Ventricle into the left Auri-
cle, & from the Aorta into the
left Ventricle, and the Arteries and
Veins are every where furnished with

Valves to answer the same pur-
pose. Every Artery is a branch from the
Aorta, and every Vein, except the
Vena Portarum, which does not
return its blood immediately to the
Heart, but goes first to the Liver,
may be considered a a Branch of
the Vena Cava.

It has been a Question, & disputed
amongst Physiologists, what was the
use of the two Auricles, particularly
the right Auricle of the Heart, but
I think it is very easily answered;
for as the Circulation of the blood is con-
tinually going on, & the Heart is con-
stantly throwing out whatever is sent
to it, it is necessary that there should
be a continual Supply, & therefore
the use of the Auricle is evidently no
other than this, to collect the blood

and it was not till within these 25
years that we knew any thing about it

when the Value of the Ventricle is
shut till the Ventricle empties it
itself. From Anatomy alone therefore
I think we may readily judge of
the rout the blood takes in the
Course of the Circulation —

We shall next indeavour to ac-
count for the Causes which produce
the Constant & reiterated Contrac-
tions of the heart, which as long as
life last continue upon the Animation
all the Theories that were formed
till very lately, were very absurd,
and none of the Causes that were
assigned were anyways adequate
to answer the Purpose, even the great
Boerhaave who so improved the
Science of Medicine knew more than
any one Man was entirely ignor-
ant of the Matter & Mover

and for it is well known, since it is
proved by a variety of Experiments,
that if any Muscle is laid bare &
then touched or stimulated, it immed=
diately contracts itself. agreeable to
this I have had frequent opportunity
of applying this Doctrine & proving
the Truth of it by undoubted Expe=
riment. For

Scot of Edinburgh gave some account
of it, at the End of his Osteology, but
he afterwards publickly in his Class,
disclaimed it & acknowledged that
it appeared to himself very dissatis=
factory.

The first Person who was the true
inventor of it was Dr Whytt of
Edinburg, and he was afterwards fol=
lowed by Baron Haller, who has
improved upon him in his Princi=
ples.

Dr Whytt considers the Heart
as a hollow Muscle, & therefore con=
cludes that it is subject to contracti=
from Stimulus, in the same manner
as any other Muscle, and that it
frequently proves from unknown
permanent Irritation, for instance, taken
& opened the Thorax of a Dog, & seen

his Heart beat from the more in-
flux of the blood till his Strength
was almost wholly exhausted. After
the irritability of the Heart was
very much lessened, I have upon
it's again received its motion, and
when this Stimulus was insuffici-
ent, & it had ceased to contract, by
pricking it with a Pin I have again
revived it, & for a great length of time
continued its Motion. Even the
Hearts of Animals which have for
some time been cut out of their bo-
dies, have again been made to con-
tract by throwing them into warm
Water & applying a Stimulus to
them. Since therefore our hearts are
possessed with so great Irritability
there can be no doubt but we can
find little difficulty in admitting

wh affects the Urethra with such a pecu=liar Stimulus

+ the Semen of Animals, when applied
to any other Part of the body ~~but the Urethra~~ appears to
be a mild & Balsamic fluid, ~~tho' then~~
~~it excites in the urethra a peculiar Sti=~~
~~mulus~~

the belief, that the ~~constant~~ timeful Sup=
ply of blood rushing into the Auri=
cles & Ventricles of the heart, is the
constant cause of its veitvalue
Contractions.

There are however some who object
against the truth of this, imagining
that the blood is not qualified to
act as such a Stimulus, for it has
been found that blood dropped into a
sound Eye which is one of the finest
& most delicate Organs, has not occasioned
the smallest uneasiness, but this Ex=
periment is not always conclusive, for
it often happens that that which stim=
mulates one Organ will have no Ef=
fect in Stimulating another. Thus
by on the other hand the Urine passing through the
nies into the Bladder, does not
Stimulate it, till it is collected
in such a Quantity as to act by

its Distention, yet the same Urine thrown into the Rectum is found to act as a considerable Purgative and Fæces ~~that are lying~~ which lye very quiet in the Intestines, till they begin to act by their weight & Quantity, when taken into the Stomach prove a powerfull Emetic. added to this, if we consider the quantity of Salts contained in the blood we shall find very little reason to doubt, but that it is a fluid peculiarly adapted to irritate the Heart & to excite it into these constant & reiterated contractions.

The Irritability therefore of the heart & the continual Supply of blood which is sent to it, are sufficient Causes to produce these constant & repeated contractions, & this theory is entirely Satisfactory & Conclusive ~~for those Causes must continue to~~

~~as long as life lasts~~ They are not
only sufficient to produce one Single
contraction of the heart, but to ac=
count for the continuation of them,
for Irritability a life are the same
& therefore these Causes must continue
to act as long as life lasts.
The Relaxation of the Heart is very
easily accounted for, for this neces=
sarily follows of course, from the Sus=
tation being taken off, that is from
the Hearts having emptied itself, for
as long as the Cavities are filled
they are kept upon the Stretch and
are distended, but no sooner is the
blood thrown out into the Arteries
than they relax themselves of course
and they remain in that Situation till
a new influx of blood from the Veins
supplies a new Stimulus, and they
are again excited into Contraction.

It is this Contraction of the Heart which is the occasion of the Pulse, for by it a quantity of blood is always thrown out of the Heart into the Arteries. We shall next endeavour to account for the Circulation of the blood from the basis of the Aorta to the Extremities.

It has been generally thot that the Propelling force of the heart was the only thing that was here employ'd but I believe it will be found that this of itself is by no means sufficient, the friction alone which takes place between the Solids & fluids, will more than Counterballance the force of the Heart. But the Arteries are to be considerd as Elastic tubes which admit of Distention, & again recoile, & by that means assist in propelling forward the fluids. That the

Sides of the Arteries are Elastic, is easily proved by taking the Artery of an Ox which you may get in the Shambles, you may easily stretch it to a very considerable Size, but it will again immediately recoil & recover its former diameter. Thus in the Animal Body when the Heart contracts & throws the blood into the ~~Arteries~~ Aorta, the Sides of the Arteries are stretched, & that occasions the Pulse which we feel with our fingers, but as soon as the Heart ceases to act, & the floodgates or Valves at the Mouth of the Aorta are shut, the Arteries again begin to contract & recover themselves & thus propels the blood onwards towards the Extremities. If for instance, there are two ounces of blood, ~~thrown~~, which I believe is pretty near the just quantity, thrown

ant at a single contraction of the heart,
it is necessary that the Diameters of
the Arteries should be enlarged in pro=
portion to receive it, but then while
the heart is relaxed, & before it con=
tracts a second time, they again re=
cover themselves by propelling for=
ward the blood to the Veins, and this has a prin=
cipal share in promoting the Circu=
lation.

From what has been said we may
easily gather, that the observing
the Pulse must be of very Great use in
Curing Disorders. There is certainly
a great deal to be learnt from it,
for from the Pulse alone of a Patient
lying in Bed, without asking him
one question we may often be able
to tell what is the Matter with him.
In fevers the Pulse is always quick=
ened, and indeed a quick Pulse consti=
tutes the very being & essence of a fever.

But there is a Variety of Fevers all
of which we may distinguish from one
another, almost alone by the Pulse.
We may for instance distinguish
the Inflamatory Fever by the Strength
& fullness of the Pulse as by the Preter=
natural quickness of the Pulse from the Nerv=
ous or hectic, and this again from
the Putrid Fever. In the first of
these, the Pulse is generally strong
& full, in the second it is low & fre=
quent, and in the third indeed the
Case is pretty much the same in
this respect, but then it is joined
with Signs of Putrefaction.
But we likewise learn a good
deal more by the Pulse for when the
Pulse is strong & full, it is a Sign
that the Solids are tense & rigid
& the Fluids in great quantity.
On the other hand when the Pulse is

low a quick, it argues that the
Solids are weak, & the blood is
thin & watery, while at the same
time there is an increased Stimulus
or Acrimony in the Fluids, or the
Solids have acquired an increased
Irritability. In the first case
Evacuation, attenuants & Refri=
gerants are to be made use of,
in the second Cordials, Demulcents
& Antiseptics.

But we have still to account
for the motion of the blood thro
the Capillary Arteries where there
is no Pulsation, and here our Che=
mical Theorists have been very
much puzzled, nor could they give us
any tolerable account of it. It is to
Dr White too that we are indebted
for this Discovery. He says that it is
not owing to the impulse of the Heart

+ Vid: Physeology: Essays.

not to the Elasticity of the Sides
of the Arteries, but to the Vibrating
Oscilatory & Contractile force of
these Small Capillary Vessels x

The Impulse therefore of the Heart
is not the sole Cause of the Circu=
lation of the blood, nor even that
assisted by the Elasticity of the
Arteries, but it is likewise pro=
moted by the vibrating & oscilla=
tory Motion of the small Capilla=
ries.

How the Veins it is still
very difficult to account for the
return of the blood to the heart.
There has not yet any one Satisfac=
tory Theory as I have seen given
for it. Here there is no impulse
at all received from the Heart, nor
is there any advantage derived from
the Elasticity of the Sides of the Vessels,
their Coats are much thinner, and do
they seem to be any ways Elastic, and
yet the blood returns for the most
part contrary to its Gravity —

It has been imagined that Muscular Motion had a great share in this, for as the Veins are every where instructed with Valves, which prevent the return of the blood to the Extremities, it was natural to suppose that the Muscles pressing upon them when our bodies are in Exercise, would naturally force the blood forward into the parts towards the heart. and it must be confessed that while we are in Motion there may be a good deal in this, but that this is not the Principal thing concerned in this Affair is proved from this that it continues while we are asleep & using no Exercise

The Pressure therefor of the Atmosphere seems to me to be the chief

if not the only Cause of the Circu-
lation of the blood thro the Veins.
We know very well from Experi-
ment that this Pressure is very con-
siderable. for if you take a thin flask & put
it into a Reciever. & then Exhaust
the Air from it, into how many
thousand Pieces will it instantly
be broke if you again admit the Air
suddenly to rush in upon it. If
two smooth Plates are pressed
very close together so as to ex-
clude the Air entirely from between
them, with how much difficulty
shall we be able to pull them
asunder, if two Globes are exhaust
of Air while their two Apertures
are exactly fitted to each other, how
impossible is it to separate them
from each other. it is upon the same

Principle that we see Mercury
suspended in the Barometer, for this
is done by exhausting the Air out
of the Tube, & then by the Pressure
of the Air only upon the External
Orifice, a Collum of Quicksilver
is supported of between 27 & 30
Inches. this is readily proved for
if you break off a piece of the
Seald End, the whole Collum
will tumble down immediately.
Water we see is supported in our
common Pumps to the height of
30 or 32 feet, can we doubt there-
fore that the human Body, which
is not much denser than Water &
is much lighter than Mercury, is sup-
ported & forced up in a Collumn
equal to near the height only of
the human body only.

tinfer it is therefore pretty eve=
t that the circumambient Air
the Principal Cause of the Cir=
ation of the blood thro the Vans,
that I would deny that Exercise
any effect upon it, on the Con=
y we can at any time quicken
Circulation by putting our bo=
s in Motion, but as this can
be used for a short Space of
e while the is continually
on I think it is evedent from
ing. that has been said that another
use must be assigned for it.
e have now finished our acc,
the Circulation of the blood &
deavourd to assign the true and
losophical Causes for it. In
next Lecture we shall proceed
speak of the Changes which are wrought

Lecture 10

Have enquired into Diet Exercise
Astring: Med: then the Principal
one of top: Applicat: &c the Cold
Bath excellent in Nerv: Rickets &c & all
relax: except in diseased Viscera
Dropsy — 5th intention to remove
the Distant: Cause — &c

Having made you acquainted wth
the nat: Causes & Cure of relax:
proceed to the partic
as of the Rickets. not only the
Muscles but bones are relaxed
Childrens bones are Cartilag but
grow firmer by the Deposit: of Ossi:
or Cretac: Substance. instead of
this Serous humour is deposited
& it may be called a Dropsy of the
bones. Children never have it after

5 or 6 years of. Subject to it from
the 6th Month. the Causes bad
Nursing & bad diet or insufficient 2dly they
Have it for some time from preced:
illnesses. Profuse Evac: Watery
Gripes. teething. Are some times
Endemical, Espec: Lincoln Shire Cam-
bridge Shire, fens relax. ~~It~~ Some
times Rickety hereditarily when
the Mother weakly. a Wine Mercht
Wife — Sympt: all of gen: relax
Dull heavy inactive, no Spts, dont
spring in these Nurses Arms, cant
walke but waddle. to support the
Center of Gravity. Wrestlers know
the use of this in dll all diseases
from relax: indolent & inactive
the Extrem of the joints Swell
from the Stagnat: of the Juices.
Leggs bent in, Neck twisted, a

the Strength not sufficient to sup-
port them. Tibia Cant like a bab
from the Muscles being inserted
in the Nates & Heel. Flexion pro-
duct from the act: of the Muscles
of Respirat: — all from making
Patients die Proposed. Hectic or
Consumptive — Cure
"The Indicat:" I must you to
what has been said under that
Article. Prop: Diet. Exercise. the Nurse
toping about in her Arms. they may
have little Carts to be drawn over
rough. Riding, friction. "It flannel
impregnated with the Fumes of Benj:
or Amber thrown on a heated Iron
Med: bring the Chylopoyes into a
good Condit: Purge with Rhub: &
Aloes rub them the best

as both tend to strengthen after this use bracers. xc "the Chalyb: No 9:" " "removal" – Off Heat: Compts come on leave of Steel but may use the Bark with very good Effect: the others may be used but these the most powerfull. with Roman Vitriol: Cold Bath particularly usefull " the distorted Parts" is no difficult Matter. may be done in Curve: of the Leggs by Irons fixed from the Heel to the Knee. or even by attempting every time you dress or undress. Child of a Pub:lican. the Palm turn'd round. Crooked Spines. from hurts, indeavours to fix in the easiest posture. lower staire crooked, round Shoulders. Monro tells of a boy who had it

fever, on recovering placed by the
fire &c — in a fortnight as crooked
on the other side, as crooked as a
Rams Horn. told of a Lady work
ing at tent Work, cured by working
with the other hand. Quilting after
the Cause of Crookedness to some
6 Shillings ruin their fortune. A
family in Harford all Quilters
crooked of one side, should
work day about. Hair Dressers
have all their Heads on one Side
therefore by inst: or some little
contrivance

Lecture 88

Of Dropsical Compl^ts. Diffinit:
[illegible] Collect: of Water in any Cavity
Naturall: Cavities
Hy: Cran: thoraces, Abdom: Cell:
unnatural Peritonei, testes, Ovari-

all the nat: Cavities, are subject to Dropsey Causes. all Dropsies owing to such as weaken the Solids & alter: the fluids, or to diseased Viscera. 4 Flooding, Hæmorrag: Intermit: tent fever, Jaundice, from improper digestion & Nutrition. 1 cause then relaxed State of Solids and alter: fluids. but there is a second cause spoil'd Viscera, Testis Ovar diseased. Ston: Liver Pancreas Diseased happen to hard drinkers hardly ever cured. the best indication is to do little. or nothing that would hurt. Squills only spoils the Ston: & hastens the Event. Dr Lee at Low Leighton, took nothing but Palliatives, Opiate or Cordial. Drastic Cathart only

sinking the Patient. Spoild Organs
much the same Hydrocele you
may Discent the Cyst: as glare but not otherwise Ovarium
can't come at. but when from
relaxat: you may Cure. Cure
the Indicatns. If from Obstruct: Jaundice
Cure them first: Floodings & acceler
ate the Waters. either by the nat
warmth: or Artifice: Shall speak of all separately
Vomits, by the Stomch Obstructions are some times
removed: fluids drawn into the Stom
Sydenham was fond of them, says Vin:
Antimon: ʒij daily will free the
body. One instance in the Middle
sex Hospital. Syr: Spin: Cerv: cured
one Patient with Sydenham. Emet often
fail Vid: formulas: of Cathar:
quickens the Peristaltic Motion &
there is a great flow of humours

have known all the ~~body~~ water drawn out of the body. but the body must be pretty strong. to be used not in the Rise of the disease. must when used sh be the briskest & most Drastic. Vide formulas — of all, the Elater: most powerfull where the Constitut. will bear. 1-2-3. Quarts. nay 3. Galls have been evacuated by it. Grace the Whistling Painter. Elater. gr. j brot away 3 quarts. gr. j Purged 24 hours & brot away pure water without fæces 12 Quarts, by this Dose. but from one Elater: the pulse sank so that I could not raise him. better let them alone if there is not great Strength of the body. Scammony is [illegible] remedy in the Physicians last legacy. at the

Crude Ant. & Stiel, does not act very strong in the Dose Prescribed— Grace when weaker could not bear Blistd: & died. Diuret: if we could always promote a Discharge this way few would die as this is the nat: outlet of the Serous Colluvies but we can never place any Confidence in them: a certain one would be worth £10000 Mr Collet on Bednal Green. Scam: & Ant & Stal. Squills, Colch: Semina Dauci ℥ss Aq: font ℔j. Stanton Gunmaker in Holborn: Ol: Junip: seemed to do best. By Dr Bakers advice Physit: to the Queens Household but he would not make above ℔j in 24 hours died—

We often Cure in Dropsies from
evacuat: All Diuret: are Stim
Sal: Succ: Tart: Cineres Genist: Sal Diuret
Abs: Canthar: by stim: & irritat
in a man were sometimes see
Dr Green de tuto Canthr: us: intern
Colch: does not deserve the
encomi: given by Dr Stork: suc-
ceeded once & no more. here
are all the Preparat: recapit;
Juice of fresh Veget: sometimes
succeeds: Juice of Wormwood &
Scurvy Grass: Squills made a Men
ich Ol Junip: did not, warm Card:
<u>Sudorifics</u>. sometimes the Hyd
Serum carried off this way. Wards
& Dovers Sweating Powder & Ipeca:
the other White Hellebore
<u>Salivation</u>. no Author mentions it

accident discoverd it to me
A Woman in Hyd abdom: Dr Ken-
nedy order Calomel - spit 21 days
℔iij in 24 hours. was perfectly
Cured. was well 3 years. then
returned, another safe Man would
not give Calomel & she died,
Young People Dropsical gradual increase would re-
commend Salivat: a young Woman from
Liverpool. Eat & Slept well. was
3 years a coming. could not Sali-
vate Spit ℔ij in a day but could
not keep it up. lost 4 inches
& did not gain. for fear of Dysent
& flux desisted. A Young Lady
at Stratford 3 or 4 years a coming
in 5 or 6 years became inconvenient to her
Faculty would not consent to Salivate
& died in Catarrh [illegible] ending in Asthma—

Lecture 12th

Yesterday of the Nat: Cause & Cure of Dropsy

A Collect: of any Serum in any of the Cavities in the a Dropsy.

Natural are Hydroceph: Thoraci Ascites Anasarca Leucophleg: or general Dropsy. unnatural. Hydrops Testis. where the Membrane is separated from the body of t. Ovarii. the Causes & those wd. bring on a relaxat: of Solids & altern: of the fluids. 2d. Diseased state of the Parts: ~~Viscera~~ difficult here. Dissect out the Cyst [illegible] in Hydropsi as Douglas recommended. If the Ovarium could be cut out might be cured. all from hard Drinking incurable have had 100 Patients all Died. those after Intermittents, Flooding

Jaundice curable - but when the
Viscera are diseased might as
well lift the Monument as attempt to raise them, Cure
off the Cause Interact: Evacuat:
or stop them. 2d Intention to
Evacuate the Waters. Natural
or Artificial Empyema
by which we Evac: any thing in the
thorax wch we may do as safely
as in the Abdom: the only certain
Sign is a Swelling of the Su-
perior Extremities which some
times happens tho the Leggs
& feet are not swell'd. Beglivi, this
may be depended on then Evac:
by the Operat: should be used but it is seldom
Practised once in a Child
in the Middlesex Hospital

Dyspepsia &c

relieved, but collected again & the Patient died. Paracentesis I differ from many. under certain circumstances being hurtfull in others a certain Cure. In spoild Viscera Dropsy is only a Sympt. always hurtfull. always died. is scarcely a palliative. In the Hydrops Ovarii always Palliative. A Man seldom will bear tapping above 4 times, one instance 6 times. Women times innumerable most of them Hyd: Ovar: & will stretch so as to hold 2 3 or 4 Gall: sometimes the Ovar: bursts & the Waters are emptied into the Abdomen. Con in the Midd.

Hospital: all contained in the Ovarium upon opening, Operati: only Palliative unless you cut out the Sack. Dr Women may often use this Palliative. Dame Mary Page. When left the Water soaks, Parboils, the Viscera of Women become more dropsical, bating those from hard drinking, than Men. & they will Eat their Victuals go about their business in Hyd Ovar: A Man is always ill: unless in Hydrocele. Never see them in high health.

Scarification

Leggs often swell. a Dew like appearance & Shining. a trick in Physic. in diff: breathing prick

with a Lancet. all the cells
communicate, & have the Water
we collect you see the Swell
ings subside at night, but
in the day drys from Cell to
Cell. when inner: danger of
Suffocat: open the Cells in
the foot. Burgeons are
long incisions. very injurious
for a stuff, shuts up the Wound
& brings on Mortification. slight
incisions best, about ½ of an
Inch in length across +
Woman Colored in Middlesex
Hospital. His Consequence when
you make the Incision, should
not Do it on the bones but
between the Muscle & Skin

Achillis & below the Gastro
cnemii Muscles. the first
Effect relieves the Lungs, which
are very liable to be affected.
Should always keep Patients in
in upright posture after Tapping
Case of Dr Rutherford Clini:
Patnt. gave Dovers Powder &
was better & he pronounced Cured
but died in the night
Miss Chudleys Porter similar
died suddenly. A Girl in Moore
fields Patnt of Dr Lobbs very
amasingly swelled. Crucial in-
sition discharged 2 Gallns in
a day breathed better in the Eve-
ning in high Spts but dead in
the Morning after Sleeping 7
hours waked with diff: breath.

Died. explains the Cause &
have never lost a Patient in that
manner since from obliging
them to sit up. Blisters
act on the same Plan but
are apt to inflame. but in
a very great Dyspnea may
occasion a more sudden de-
rivat of the Waters from the
Lungs & takes off the Spasm
Case of a Woman a Chees Mong:
near St Thos Hospital. have
explaind the Artifice Evacuat
as to strengthening remedies after
the waters have been evacuated
by the Means I have mentioned
I refer you to what was said under
the head of Relaxation &c.

Lecture 43:th

Now of too rigid Solids, & here are only the Diseases of old age

Infancy too relaxed, voilable, then grow by age stronger & stronger. &

at last too great rigidity unfitted for motion. hence bodies wear out.

The longer any Animal is in coming to perfection the longer lived,

Fowls coupled. a dog in perfection in one year. begins to decline at

10. dead 15. a horse 4 years, grows old at 20 some live to 30 or 35

Man not perfect till 20 live to 90. 100. therefore the sound

perfect the rooted die sooner

Dogs, Horses, Men all the Diseases

of old age from rigidity,

the vascular parts Cartilag
the Cartilag: bony. hence wrinkles
the Intellect: faculties fail in
consequence of the organs becom=
ing rigid. Childrens diseases
all from relaxat: Rickets
Convulsions &c vice versa
Old People die often of a rupt
ure of the Heart or Vessels. the
Walls of the Heart wear thin
late king: rose to light his own
fire as usual, was seized with
fainting & died away: died of
a broken heart. this most freq
by the Case of old People who
die suddenly without Pain
an Old Lady of Queensbury invit
ed her Children & Grand Children

to dine, waited on them to the
Post of the Stairs, &c. by propping
on the breast blood came out
of the mouth after dead. sometimes
the people die of Mortification
giving at the Bowels & proceeds
from an Ossification of the Arteries
with prevents nourishment from
being carried to the Parts
the fluids not properly prepared
Rheumatic Rheumatism, Asthma. Some
of a delicate make die of old
Age at 25 or 30 Case of a young
Man as high as a table Knife
Hunt, wrench. died of old age at
27. If we could make a Mould
of his Solids as plain as his
of Insanity I would live as long

the only remedy is lying abed
back an Old Woman of 60 st
bed against 25. Lame all
Old Animals are averse to Ex-
ercise. Dog, Cat. & an Old Man
in his Villa with his Pot &
Pipe in his Elbow Chair
little more can be recommended
Pallsy of Rheum. Rheumatism
Asth. Colds. Apoplexy. Palsy
Loss of all the faculties. out
of the Heart from offices
Values. nothing to stop the
body so much as close appli-
cation to Study
Diseases of the Blood,
of the Solids. Cure treated
Spontaneous. Degeneracies of
the Blood,

N.B. Mr DeBerdts peculiar
Idiosyncrasy with respect to
Strawberries Currents & every
other fruit but Apples & Pears
Lady at Baths mistake in tak
Vinegar for Rhenish — Mr Cooper.
Only one Lecture missed

Lecture 16 —

Spontaneous Gluten the Dis
eases of Old Age Read
no Med: Attendant but by
its Action on the Solids wch Stim
the Solids to propel the blood
onwards, all Expect: &c Stimulan
vide the Catalogue —

Of Putrescent Acrimony Cegl.
1. ab extra the blood Not Putrid but Pu
trescent because when drawn soon
Putrefies. & from this Source

a traine of the worst of Dis-
eases. Jail Fever. Scurvy dif-
only in not being attended
with fever. most freq^t at Sea
but sometimes at Land & shod
oftener meet with it if the same
circumstances. Causes
Vide Animal food. will pro-
duce it for want of an Acid
Chyle which Corrects. Dogs
will live without. Man Bird.
Great & long continued heat
West Indies. Boerhaaves exp
alk: Salts hasten Putref: in
the body whatever they may do
out of it. by preventing the fer-
of the Aliment
mentat: in the body. &c
Signs &c Vide. there can be no
Putrid State of Fluids. but there

is a relaxat: of Solids, & all the
Symptoms consequent of relaxa:
Cure. Respect to be paid to the Cause
Vide 3d attend to Diet. a Person
starved to death dies of Putrescency
of Juices. for want of Nu. Veget:
afford the greatest q:ty of it. would
give liquors such as milk. Vege
table Subst: Wine Malt Liquors
Wort. Bottled Beer. Farinaceous
Summer fruit. I cured
greatly elucidated by the Theo-
ory of Animal Nutrifaction. Ty-
phous Fevers cured on Veget: would
soon be cured. Dysentery
Cure 2 fold. — 1 warm Dry Cure
Air &c Very Diff: from what
is called Scurvy & Land. & Cure
very different on Mercury

the other worse for it

Lecture

Of Fevers in General

Of Consequence to know the Diagnosis. only one is the Pulse. many other Sympt. wch happen in one fever & not in another, Head Ach Delir: Vomiting Diarrhea. Boerhaave selected all that happen in any fever & found only three common to all Horror, heat quick Pulse. ~~but~~ Austindike says there are fevers without Shivering, or increased heat but all have a quick Pulse functions impaired. Sickness and quick Pulse a fever: Pulse intermits quick one day slow anot

by that we judg whether the
ood is on or off. if it exceed 80
in general a fatal. but there are
some Singular instances, 160 is the
most I have seen. Patts seldom
die under 100, never recover when
above 132. or 140. woman may.
Watson. the quicker actors
travellers the worse for the Pat
in Putrid fevers generally runto
120. often very dangerous. Nervous
Patts often have quick Pulse
100 but not fevr because they
can eat drink Sleep & det easily
by the Pulse tell an Intermitting
fever may ever have the Pulse
does not always perfectly regulat
in its quickness In all the

Inf:or
fevers & quicker Pulse. "the Causes" Exercise will bring on a temporary fever. Spirituous liquors these will go off if he does not get Could. Causes 2 fold "general or particular" perspiration" then all the Causes as we can reduce all to them why then rack our invention for more causes. Could the most freqt Cause. Dr Radcliff: A Great Variety of Sympt: only serve to confound the Pupil: many fond of finding a new Symptom, is nugatory & trifling. An Irritation the acct for all the Symptoms this causes the motion of the blood to be increased. heat.

tongue dry, Appetite lost,
all the functions overturned,
Delirium Subsult: at long run
the fever becomes its own cure
for as the Circulat: can change
the Ascessant Chyle into putres
cent Blood, so it changes the
irritating Stimulus. & well it
is so for many order nothing but
Pulv: e Chelis, or Saline Draught
Sydenham left Delirio to nature
& if his Patint not worse one
day than another concluded
he was better. but when Nature
overdoes her Part we weaken
when She is deficient raise her
by confect: Card

Lecture 18th;

In last Lect: Diag: Cause & Eff: of Fever. Proceed to Prognos: Cure every fever terminates in death another disease or Cure. in another disease as Bubo Plague. 1st Death. the violat: febrile Cause deposited on some of the Vital organs. sometime from mere weakness when nature cant keep up the Circulation Unexcepted every fever terminates in death thro an affect. of the Brain or Lung Staring of the Eyes Startings Pickings of the Bed Clothes bad Prognosis. Impeded

itting Sobing Respirat:
Difficult Breathing, Anxiety
mpeded Circulat: thro' the
Lungs. bad. especially with
quick Pulse: if on the contrary
slow not above 100 & all
the other Sympt: easy, no dan
ger. Antients did not exami
ne the Pulse till Galen
ecause they did not know
what it indicated, but Hippoc
ttended accurately to the
Respirat: & to our Pulse. and
they formed such indicat: as
we do from the Pulse. tho
Anxiety is for the most Part
very bad, yet it sometimes

is relieved by an Eruption.
is of great importance in Jaws
to attend to the State of the
Brain & Lungs. Hiccough Death
a very bad Omen in the be-
ginning of Fevers. Case of Mrs
Hesfield. Mrs Jacobs Maid
an Eruption in Nervous Cases
it is quite otherwise, are afraid
of Opium for 20 Years. Purgans
always taken from the Brain
& Lungs. Quick Pulse, & want
of Appetite, for have found a
Person be nourished, live with-
out nourishment. Although one
may say a Patient stands a very
bad chance, but the skill of a
Physician is shown by discern-
ing his reasons

thornbury always used to say
s Patients were in Extremis, if they
ad been called ½ an hour later
uld not recovered. is much
tter Practice than to make
ght of it. but a Man of Science
ght sometimes to make a true
ust Prognosis, & to be able to
e his reasons for it. 160 Pulse
recoverable. If very say they
ull die I could mention 100
stances where they have died
& recovers. Subsultus, a
lo 120 never recovers. If the
ulse, under that they may
nnicely Sighing & Sobbing stay
a very bad Chance. if he takes
o drink as Nourishment he

stands no Chance. want of
rest comes under the head
affected Brain & is a very bad
Sign. Restlessness is a
Symptom of Putrid fever &
was the Case of Dr Hardly of
St Thos & is very bad D V
Curative intentions. As there
is a Stim: in the Habit. wh
proceeds either from a gene-
ral or partic. Cause the first
intention must be to correct
& expell this. from the Eff:
quick P. heat ~~symp~~ inflam. affect:
it appears that the second
intent must be to moderate
the fever. Sydenham remarks
that the fever often cured itself
& therefore stood an idle Spec-

ators unleſs the fever was too
igh or too low when he either
vacuated or gave Cordials.
ide Sylab: Hoff: 34 &c —
reparat: of Antimon: often
arry off fever at once but
ldom after the 4th day. fevers
ll except Putrid or Infectious
ave Critical days. some may
carried off before the 4th
ay, but if it continues till
hen cant before the 8th if
ot then not till 14th & if
ot then not before the 21st.
f it continues till the 21
ll will recover, except in
utrid fevers where they die

sometimes after the 28th
Autumn: only Once before
the 4th Day. 2 Inflammations
Ad: 35.

Lecture 19th

Of the Symptoms. we
remarked that there were
3 intentions of Cure.
1. Diarrhoea is sometimes a
dangerous Symptom & it is ne-
cessary to moderate, Singultus &
wherever any Symptom interferes
should first remove it. we have
enumerated fol 36 the most dan-
gerous. &c 11 " We rarely do any
thing in the Cold fit of a fever unless
in Case of extream weakness

nt fevers begin with it but not
ll. seldom attended with much
nger unless in extream weak=
ess. & if you give Cordials, as a
t fit always succeeds you are
t to increase it & are in danger
f converting it into a Continued
ver. so that you should never
ive more than a little Sp. Lavend
mp: & Sugar. Sometimes heat
roceeds from Putridity. I once killd
n only Son by bleeding him thro
mistaking a Putrid heat for
flamatory. they are attended
ith a burning Stupefying sen
tion. In London more to be guard
ainst than in the Country because
are freq.^t on acc.^t of the Putrid

Exhalations, &c &c &c &c &c &c &c
"a Nausea" &c An Emet: should
always be given. cant prescribe
one amiss in the beginning of
a fever. this Sordes must [illegible]
off lest there should therefore
Vomit. Sydenham observed
that if you dont give one when
there is a Nausea in the begin-
ning, a Purging will come on in
the End. if there is not much
nausea the that Emet draught
"Anxiety" ~~happens~~ Sometimes ~~which~~
from Eruption & is relieved
by the breaking out." expedient
"a Diarrhœa" a mild vomit
may be given at any Stage
of the fever & is often the only
remedy. Ipecac: Powdered better

tion the Vin: Ipecac: wch is harsh
an Infus: of Ipecac: to be preferred
to the Vinum ʒi, Ipec: Aq: ℥ij
After Evac: Opiates in Clysters
is a better way of giving Astring:
than by the Mouth. Case of Mr
Storry. this Dr. Fothergills opinion
that Opiates are the best Astring:
Pulv: & Bol: owe all their Effects
to it. an easy gentle Diapho-
resis should be attempted at the
same time vid: form: No 24.
there are different judgments
about stopping a Purging. if the
Patient is strong & the fever is high
let it go on but if the Patient is
weak stop it. the Bark Astringt
wth tinc: Theb: most Effectual

Lecture 19th

We are to proceed to enquire into the Cure of the rest of the Erupt: "Petechia"

some kinds of Erupt: serviceable As in the Small Pox Measels & Ulcerous sore throat where the Erupt: appears about the throat when the feb: Matter is thrown out of the Course of the Circulation it Solves the fever but Petech: in Putrid fevers are of a different Sort. in the small Pox & in every Critical Erupt the best way is to moderate the febrile Impet: either by V.S. or Cordials. but

Profuse Sweatings" they are
chiefly from a relaxed State of
the Solids & a diſsolution of the
Fluids. the Bark as Specific
s in an Intermitting Fever. it
ometimes proceeds from a double
Quotidian where it is also usefull
the Mineral Acids Alum Vitriol
to may be given —

"Watchings" many object to
Opiates. Morgan in Rowe's Med
advises Mithridate, Venice Trea-
cle & is very fond of Opiates. for
my Part I never saw any bad
Effects from it. Case in Bunhill
Row. Mr Dixon near Tower
hill bad fever Singulti: & was

greatly weakened. Gr xv. of Musch Extract: Theb: Gr ijß & it was repeated in 2 hours they who object to Opiates go from theory & not Observat: whenever a Patient is restless I prescribe an Opiate Mithridate is the common Opiate & is generally called a happy Composition. I used to despise it & Venice treacle. Dr Mead said wth Mithri ʒß wch contains but 1/6 Gr of Opiate he could do more than Gr j. in Miliary fever, low fever or ʒß with the Saline Draught is proper if too low give it with ʒß of Confect Card: Sweats lay

keeping the Patient from sleeping
every 6 hours. Sal Sedativ
is used in England tho it
in Germany. will procure sleep
when Opiates fail. Does not suc-
ceed so well the 2 night as the
first but does again by inter-
mitting a night or two. seem
well suited for Maniacs with
whom Opiates do not agree, & is
certainly better than Opium
to the Saline Draughts
Coma " " useful" We generally
stimulate freely Plentifully.
Here is a great connexion
between the Stomach & Head but
are useful "Delerium" or Sub-
sultus are owing to the same

Cause a Load in the same Manner
only in one the nervous Influence
is Determined to the External
Muscles, in the other the Energy
is affected. For Delaceums are
owing to an Inflamatory Cause
& consequently wont bare bloo
letting. Stimulants such as
Blisters & Sinapisms act by
drawing off the attention &
exciting the Nervous influence
from the Part Affected: a greater
overcomes the less. Opiates
are the last remedies for
Subsultus Tendinum. Below
where there is too great irrita-
bility & not with Stupor
all Diffusible Stimulants

hurry of Spirits are best cured
by Opiates. Case of a Girl who
pulled out her Eyes a Roman Ca-
tholic &c — was first bled ℔j in
Middlesex Hospital. then ℥xij
more next day after which
had xx gtt of Laud: wch brot her
to her Senses! but being upbraided
by her Mother relapsed, & was
re-cured by another dose of Laud:
it is certainly the best remedy
in all sudden hurries of Spts.
In many fevers have known it
of great use in Delirium. Case
in Holy Street near St Thos Hospi-
the Apothecary gave 60 gtt at
a Dose quite relieved. but the

fever continued till the 19
day when he died. Where
there is a Coma or Stupor no
body would give it, but only
where there is too great irrita-
bility: never to be used where
Sinapisms & blisters are proper.
in Coma you may use Coat
Jacote & Breeches of Blisters
& Sinapisms

Lecture 20th

Have enquired into the general
nature Causes & cure of fevers now
of the Partic: Species & we
may treat of the Acute Inf.
& low Nervous fever together
wch are opposite
these arise from Cont., viz. Sout.

weak of the Putrid: the partic
ff: between the 2 consists in
e Constitut of the Patnt I never
seen a Robust Girl affected
with Insan: nor a Strong ro-
ust with the Nervous, hence
e Predispos: Cause of one
Strong Solids & rich blood
eak & thin of Nervous.
ometimes we have a fever of the
iddle nature neither Inf: nor
ervous, Constitut of a Middle
ature are subject to these;
the Antients were exact in re=
marking Critical Days, Moderns
so much neglect it. but I used
take notice of every fever &
at without any Previous the

ary. & I estab: rules which I have always found thus that the Stronger the fever the sooner it terminates the weaker the later. Putrid fevers have no certain duration some I have seen live after the 28th day Autumnan frequently carry off a fever by throwing out a Sweat in 24 hours or within 4 Days but if it is not done in that time you can't do it before the 8th day ne this you excite a Sweat ever whither the Morbif: Matter acquires more acrimony by its remora. Nervous fevers seldom terminate before the 18th or 21st day